THE CHEMIST AND DRUGGIST

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THE ATTITUDE OF THE PHARMACEUTICAL SOCIETY.

Our articles upon the proposed new Medical Bill have extorted from the leaders of the Pharmaceutical Body the confession that they "were not prepared for the opposition that appears to be threatened to this measure." We are bound to believe them, for the slightest prescience of the coming storm would have prevented them committing themselves even so far as to hail the principle of the proposed Bill as correct. Now, while the storm is raging, they throw oil upon the troubled waters in the vain hope of restoring the calm which is required to ensure the easy sailing of their snug chartered vessel. "It cannot be supposed," writes their ready journalist, "that it was ever contemplated, as some appear to think, that a large proportion of the Chemists and Druggists throughout the country should be deprived of the power of carrying on the business in which they have been engaged for many years. Such a proposition would be too preposterous to be entertained for a moment, and we think those who have taken alarm in anticipation of such a result have very little to justify their hasty conclusions." The Pharmaceutical writer may be able to detect a hidden meaning in the proposed amendments of the Medical Act; but less gifted people, accustomed to accept the ordinary signification of words, will cling to the belief that the object of those amendments is simply the abolition of the existing rights of Chemists and Druggists.

The objects contemplated by the Medical Council in reference to Pharmacy appear to the clairvoyant journalist to be "quite in accordance with the principles which have always been recognized by the Pharmaceutical Society." Now, to us the objects appear to be directly opposed to the principles which were *once* recognized by that Society. The founders of the Society hoped to elevate Pharmacy to her proper position, and therefore could not have acknowledged the principle that she should be the bondmaid of Medicine. But let us quote a few more sentences from the *Journal*:—

"The adoption of these principles has repeatedly been urged upon Chemists and Druggists in the pages of this Journal, and we feel satisfied that no true friends to the Pharmaceutical Body will seek to raise an opposition to the proposed measure for extending their application. Of course, it is here assumed that *this measure will be based upon a recognition of existing interests among the Pharmaceutical Body*, without which, we repeat, no such measure could be carried. It has been insinuated that the Pharmaceutical Society would be benefited in some especial manner by the proposed Act, and that they therefore have a particular interest in promoting the measure. *This we entirely deny*. Indeed, so far is it from being the case, that we have no hesitation in saying that *the measure would be a far greater boon to those who are without than to those who are within the pale of the Society*. The principles of the proposed measure are the principles of the Pharmaceutical Society, and the members of the Society do not require the new Act to enable them to apply these principles, as far as the limited sphere of the Society is concerned; but having adopted and advocated these principles, which for the last twenty years the Society, and this Journal as its organ, have laboured to uphold and to extend, we are now anxious to see a favourable opportunity turned to the best account in furthering that object. We have no exclusive interest in promoting this,—on the contrary, self-interest might dictate a different line of policy; but the interests we advocate are those of Pharmacy and of the whole body of Pharmaceutical operatives."

We wish our faith in the disinterestedness of the leading Pharmaceutists had never been shaken. We wish we could accept the journalist's flat denial of our statement that the Pharmaceutical Society would be benefited by the proposed Act. We wish we could believe that the Pharmaceutical Society's present policy is opposed to self-interest, and dictated by the desire to obtain a great boon for those who are not within its pale. In fine, we wish we could see any chance of that "united action and harmonious co-operation" which the writer at the conclusion of his article so warmly advocates.

MEDICAL COUNCIL *v.* CHEMISTS AND DRUGGISTS.

We have much pleasure in referring our readers to the reports of the Meetings held by the members of the United Society in Leeds, Sheffield, and Manchester during the past month, for considering the proposed new Medical Act. Although we have no fear of the proposed Medical Act being made law with the 56th and 57th sections as they are at present, yet it is very necessary that the Chemists and Druggists of the United Kingdom should be aware of its provisions.

It is evident, from the 56th section, that the Medical Council consider that, "for the better protection of the public," the Chemist and Druggist should be protected; and, accordingly, they devise that no person shall keep open shop for the compounding of Physicians' or Surgeons' prescriptions unless he has received a Certificate of Competency from somebody duly authorized in England, Ireland, or Scotland. We are quite of opinion that the Chemist and Druggist ought to be protected, but we certainly cannot agree with the sweeping measure intended to be introduced as a pretended boon to the trade. We are astonished to find a committee of learned gentlemen presenting such a measure for adoption—a measure which, if sanctioned by our Parliament, would deprive from 30,000 to 40,000 tradesmen of their living, and leave them to eke out a miserable existence by selling goods the demand for which is exceedingly limited.

We doubt not that the cause of this attempt on the part of the Medical Council to cripple the Chemist and Druggist is *counter-practice*. Can the Medical Council wonder at the large practice some Chemists and Druggists have in counter-prescribing, when some of the Medical Profession keep open shop for the sale of Drugs and Chemicals? Can a Chemist and Druggist be censured for turning to good account those talents which are rejected by the Medical Profession, inasmuch as they refuse to give prescriptions, and prefer to keep surgeries in which they compound their own medicines? We certainly think not. If the Medical Profession will have their shop-surgery, the Chemist and Druggist must have free trade, and consequently will use every effort to gain a living.

We cannot but express our regret that the Medical Profession and the Chemists and Druggists should be so jealous of each other, and, although outwardly friends, such enemies at heart. An excellent opportunity, we think, is offered at the present time for amicably arranging the points in dispute. The United Society, we perceive, have framed an Act of Incorporation, not for the members of this Society, but for the whole trade. Let the Medical Council throw their influence into the scale on behalf of the United Society; and when once an Act of Incorporation is obtained, it will be an easy task for the Medical Council and the Council of Chemists and Druggists to make such arrangements as will be beneficial to both bodies. Whether our proposition will meet with the consideration it deserves at the hands of the Medical Council, we know not; but we would suggest to the Executive Committee of the United Society the desirability of having a personal interview with the Medical Council to urge this proposition.

NEW REMEDIES.

CHELONE GLABRA.

Synonyms.—Balmony, Salt Rheum Weed, Snake Head, Turtle Head, Turtle Bloom, &c.

The generic name of this plant is evidently derived from the Greek Χελώνη, a tortoise or turtle, from the fact of its corolla having a shape somewhat similar to the head of a reptile; which circumstance also gives rise to some of its popular synonyms.

This genus belongs to the Natural Family *Scrophulariaceæ*—the Figwort Order, and contains but a few species, which consist of herbaceous plants, abounding in hot situations, and having white, purple, or rose-coloured flowers, which bloom from July to September. It is stated that only one of the species occurs in the Northern and Middle States of North America.

Botany.—The *Chelone glabra* is said to be found in wet situations in different parts of the States of North America. The roots are perennial; the stem, from two to four feet high, and erect. The leaves, which are subsessile or petiolate, are destitute of odour, but have an exceedingly bitter taste; they are the parts employed for medicinal purposes. The flowers are terminal, and arranged in the form of a dense short spike. Several varieties of the plant are said to exist; and these differ in the form of the leaves and the manner of their insertion, and also in the colour of the flowers, which vary from a pure white to purplish.

Chemistry.—The active qualities of the leaves may be extracted by water and alcohol. They have been found by analysis to contain tannin, gallic acid, starch, gum, sugar, &c., and a peculiar body termed *Chelonin*, said to be a neutral substance, and considered to be the chief or active principle of the plant, upon which the greater part of its virtues depend.

Medicinal Properties.—It is stated to be tonic, cathartic and anthelmintic, and to be valuable in jaundice and hepatic diseases, and useful for the removal of worms. It is also said to be employed as a tonic, in small doses, in dyspepsia, debility of the digestive organs, and during convalescence from febrile and inflammatory diseases. According to Dr. Lee, its medicinal properties have as yet been but imperfectly investigated; but he considers sufficient trials have been made to prove them decidedly tonic, laxative, and anthelmintic. He further states,* "It has long enjoyed considerable reputation in popular practice, as a remedy in jaundice and chronic hepatic diseases, as well as for the removal of worms, for which it seems well adapted. That it excites the secretory action of the liver, when given in small and regular doses, cannot be questioned; while, at the same time, it exerts a tonic influence upon the digestive organs, and an alterative effect upon the system generally. Hence it is a highly useful remedy in many chronic affections where a conjoint depurative and tonic indication is present." As an alterative, Dr Lee combines one or two grains of chelonin with two grains of rhubarb; as an anthelmintic, two grains of chelonin with one grain of gelseminin* and ten grains of powdered wormseed. He also considers that metallic iron (Pulvis Ferri), reduced by means of hydrogen, likewise forms a good combination in such cases. He further adds—"As a tonic, it is well adapted to cases of atonic dyspepsia and convalescence from acute diseases. In hepatic torpor with tendency to constipation, it will be found a highly useful remedy,—but not to the exclusion of occasional adjuvants, as the mild mercurial preparations."

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* Tilden's Journ. Mat. Med., vol. ii. p. 442.

PRINCIPAL PREPARATIONS AND DOSES.—The following preparations are made by Messrs. Tilden and Co., and are enumerated in their Book of Formulæ, with the doses appended :—

Chelonin—gr. j. to grs. ij. Dr. Lee considers this preferable for employment where the pilular form of administration is desirable. The *Fluid Extract*, in doses of f.ʒj., he thinks to be well adapted to a majority of cases where a stomachic effect is indicated. The *Tincture*, prepared by mixing one ounce of the fluid extract with eight ounces of diluted alcohol, or with one ounce of the leaves to one pint of proof spirit, may be given in doses of from ʒj. to ʒij. The *Syrup*, prepared by adding half an ounce of the fluid extract to twelve ounces of syrup, is well adapted to many cases, especially those of children, in doses of from ʒiij. to ʒv.

SUBSTITUTES FOR WAX.

BY BARNARD S. PROCTOR.

IN the January number of the CHEMIST AND DRUGGIST for the current year, I published a short paper drawing attention to the adulteration of white wax : this present paper follows as a natural sequel to the former, and is designed to indicate the relative merits of various substances which may be considered suitable for replacing wax in one or other of its uses. With regard to the fitness or otherwise of any of these substitutes to take the place of wax for medicinal purposes, I shall say nothing, such a substitution being both unnecessary and illegitimate. It is also unnecessary to say anything with regard to their fitness for making candles, &c., that being unimportant to the Chemist and Druggist. But for perfumery purposes, for the polishing of furniture, and the "waxing" of thread, substitutes may with advantage be looked for; and the fitness for any of these purposes will indicate pretty well the fitness of the material in hand for other special purposes, which it would add too much to the length of the present paper to notice in full. I have also indicated the prices (quoted a few months ago, and, of course, subject to variation), and the melting point.

Spermaceti is too well known to call for any remark : stearine and paraffin greatly resemble it when pure, but the former is subject to a greasy, rancid odour, and the latter to the odour of coal tar; they are both more crumbly than spermaceti, the paraffin especially, being readily rubbed to powder, and both are purely white. China and Japan wax greatly resemble good block white wax in their general appearance, but are liable to become coated with a fine white efflorescence resembling the bloom upon many kinds of fruit; they have a toughness somewhat inferior to wax, and when a knife is forced into them, they break with a crackling sound ; they are both almost destitute of odour, and what they have is not objectionable: of the two, the Chinese wax most nearly resembles the product of the bee.

Carnauba wax, on the other hand, differs greatly from all the others. It is hard, brittle, and darker coloured than the others ; in physical properties it seems to hold a position between white wax and sulphur; it takes a fine polish when rubbed with any soft material, and is so hard as not to take finger-marks with the heat of the hand : it is suitable for furniture polishes, either alone or mixed with Japan wax or beeswax.

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* An article on this new medicine will be found in our third volume, page 70.

TABLE OF WAX SUBSTITUTES, SHOWING THEIR COMPARATIVE MERITS AND PRICES.

	For Thread.	Furniture.	Perfumery.	Melting Pt.	Price.	
					s.	d.
Genuine Block White Wax	Good	Good	Good	145°	2	10
White Cake Wax (adulterated)	Medium	Medium	Good	..	2	4
Jamaica Yellow Wax	Good	Good	Good	..	1	10
English ditto	Good	Good	Good	..	2	1
Spermaceti	Bad	Bad	Good	112°	1	5
Stearine	Bad	Bad	Good	144°	1	4
*Tree Wax, Japan	Med. Good	Medium	Good	115°	0	10
*Insect Wax, China	Med. Good	Medium	Good	118°	2	8
*Carnauba Wax	Bad	Good	Bad	192°	0	10
Paraffin	Med. Bad	Bad	Bad	131°	1	5

* In original packages of about 1½ cwt. each. I am indebted to Messrs. Hodgkinson, Tonge, and Stead, Upper Thames-street, for samples and quotations.

The quality of some of these materials is subject to considerable variation: thus, paraffin may be obtained quite free from odour; and if so, might possibly be used without disadvantage in the preparation of cold cream or pomades. It is probable that there are other variations besides odour and colour, judging from the melting points. Miller quotes the melting point of paraffin as 110°: I found it melt at 133°, and congeal at 103°. China wax he states to melt at 182°: I found it melt at 133°, and congeal at 103°. Japan wax I found melt at 128°, and congeal at 102°; the melting point quoted on the table being the mean of the two observations.

The melting point of stearine is liable to vary from very slight causes (see Miller's Chemistry); but so great a discrepancy as indicated above for China wax must surely be the result of a difference in the nature of the sample. The price quoted for Japan wax seems much below what its good properties would seem to justify. The qualities would probably become more uniform, and the prices would find a more reasonable level, if more extensive trial were made of these materials for the various purposes for which wax is at present used.

11, Grey-street, Newcastle-on-Tyne.

THE PHARMACOPŒIA—PHYSICIANS' PRESCRIPTIONS.

The following extract from an address delivered by Mr. Shaw, the President of the Liverpool Chemists' Association, relates to subjects in which all our readers are interested:—

"At the commencement of the session I looked forward to the publication of the National Pharmacopœia before our meetings were brought to a close, but in this respect we have not been gratified. You are aware that it was intended to change the value of the grain-weight hitherto in use, and the new formulas were proposed accordingly: last year, however, about the time of our first meeting, the Pharmacopœia Committee reconsidered the intended change, and I am happy to say that we shall now retain the standard grain intact, the only alteration being the adoption of avoirdupois weight instead of the apothecaries', and which change, I have no doubt, will meet with the approval of Chemists and Druggists. It is perhaps partly to this circumstance that we may attribute the delay of the publication of the work, the formulas, of course requiring revision; and while on the subject of the Pharmacopœia, I would just observe that the Medical Council, having decided to publish the work in the English language,—a decision which must commend itself to the approval of all, when we consider that perhaps in nineteen cases out of twenty the English translation of former Pharmacopœias has been made use of by the Chemists and Druggists in preference to the Latin edition,—might, I think, advance a step beyond their province, and recommend physicians to write the directions of their prescriptions in English. This is a subject which has been discussed before; and while I consider it very advisable, or even essentially desirable, that the formulas should be written in Latin, as has hitherto been the practice, I cannot see any valid reason why the direction should not be written in English. Not that I entertain the least doubt of the general competency of Pharmaceutists having the responsibility of dispensing prescriptions to translate them correctly, but it would, I feel assured, in very many instances, prove a source of satisfaction to the patient or those in attendance, in case of any doubt, to verify the correctness by reference to the original. Instances have occurred where, in the press of business, 'tablespoonful' has been accidentally written instead of 'teaspoonful' by the dispenser. Directions have also been written occasionally which were not quite so legible as might be. Bottles containing mixtures and liniments are also very liable to have their labels partially defaced by the carelessness of the nurse in pouring out their contents. In all these cases a reference to the directions in the prescription would obviate any difficulty. I am not aware that any sufficient reason can be advanced against the general adoption of the practice. I may observe that it is becoming much more frequent than it was formerly, and several eminent physicians and general practitioners do it invariably. I have seen it somewhere stated that it is an advantage to have a prescription written entirely in Latin, so that, in these days of cheap travelling and intercommunication with foreign countries, it might with equal facility be dispensed in any part of Europe; but, practically, this facility would in no manner be interfered with."

PHARMACEUTICAL CONFERENCE.

Fifty influential members of the Pharmaceutical Society, including four of the Council, have invited their brother members to unite in a conference, to be held at Newcastle-upon-Tyne, during the meeting of the British Association for the advancement of Science, which commences August 26th, 1863. The objects of the Conference are said to be as follows:—

To consult whether it is desirable to establish an Annual Conference on Pharmacy either meeting at the place and time of the Meeting of the British Association, or otherwise.

If accepting such a proposal, to complete the organization of an Executive; to recognize the various Provincial Chemists' Associations, and to consider how best to promote their union; to discuss and allot for investigation subjects in Pharmacy which demand inquiry, whether referring to new remedies, or processes, or adulterations; to appoint committees for any allied objects, &c.

We shall give some account of the proceedings of the Conference in our next number.

THE *CHEMICAL NEWS* ON THE PROPOSED NEW CHEMICAL BILL.

Our scientific contemporary in a leading article makes the following sensible remarks respecting the Medical Council and their apologists:—

"There is only one way, so far as we know, of arriving at a knowledge of people's intentions, and that is by considering their acts and their words. There may be very profound or very shallow diplomatists and politicians who make use of both only for the purpose of dissimulation; but it is not with such, we imagine, that we have now to deal. If, then, we consider the acts of the Medical Council, we are obliged to observe that we have seen nothing in their dealings with their own profession to lead us to anticipate that they would show the smallest liberality towards those whom, for some insane reason or other, a large number of the medical profession regard with the greatest jealousy as opponents and enemies. It is strange that it should be so, and it argues the possession of not a little selfishness and narrow-mindness; but no one can deny the existence of this feeling of jealousy.

"And if we turn to the proposed new Medical Bill for the words of the Council, what do we find but a clause commencing as follows:—

"'It shall not be lawful for any person to keep open shop for the compounding of physicians' and surgeons' prescriptions unless he be a Licentiate of the Apothecaries' Hall of England and Ireland, or shall have received a certificate of competency to compound medicine from either of the above bodies, or from the Pharmaceutical Society, or from some other body duly authorized in England, Ireland, or Scotland, by the General Medical Council to institute the necessary examination and to grant such certificate.'

There is not here, nor is there in any other part of the Act, one word to induce us to believe that the Council intended to recognize the rights of Chemists and Druggists actually in business. It is impossible to suppose that those who drew the Bill did not know that of the whole number of Chemists and Druggists in England but a small proportion hold a certificate; and the question of the recognition of the majority must have been discussed by the committee.

"It is said, however, that the Bill in its present form is only a 'rough draft,' and that it will be time to discuss its provisions when they are presented in a more complete shape. It may be so, but to be forewarned is to be forearmed. We have little doubt that before the Bill is presented to Parliament a clause will have been added to protect those who are in business before it comes into force as an Act; and if the promise of opposition should have no other effect than this, the gain will not be small. But if Chemists and Druggists are wise, they will raise a strong opposition against being placed under the regulations of the Medical Council at all, certainly until they distinctly know what these regulations may mean."

EXAMINATION OF MINERAL OILS.

BY W. B. TEGETMEIER.

THOMAS'S ALEXANDRA OIL.

Messrs. Thomas and Co., of Exeter, have forwarded samples of a highly refined petroleum oil for examination. It is perfectly colourless, exceedingly limpid and liquid. The odour is slight, and not at all of an unpleasant character. Its specific gravity is ·800, and its inflaming point 140° Fahr.; its point of permanent ignition being a few degrees higher. It burns with a very white light, free from smoke. With these qualities, it is almost needless to say that it is a good safe oil of a superior character.

THOMAS'S PATENT HYDRO-CARBON MODERATOR OIL.

The same firm have forwarded a sample of their hydro-carbon oil as adapted for their moderator lamps. The examination of this proves it to be a slightly oleaginous fluid of a very pale yellow colour, perfectly free from odour; its specific gravity is ·835; its igniting point is remarkably high, being over 300° Fahr.; whilst its point of permanent ignition is 316° Fahr. With these properties, the oil must be characterized as perfectly safe. We have not had an opportunity of testing its illuminating power, as it is adapted solely for the moderator lamps as manufactured or altered by Messrs. Thomas and Co.

TURPENTINE SUBSTITUTE.

Messrs. Careless, Blagden, and Co., of the Hope Chemical Works, have forwarded to us a sample of their turpentine substitute. This is a perfectly colourless, limpid liquid, free from any unpleasant odour. It volatilizes readily, without leaving a trace of residue, a few drops on a piece of paper disappearing in the course of five minutes without leaving any trace behind. It is so pure a spirit and so well rectified, that it answers perfectly for the purpose of removing grease, &c., in the same manner as benzine.

From its great volatility, its vapour takes fire at the ordinary temperature of the atmosphere, and, therefore, in quantities over 40 gallons would require a licence for the premises in which it is stored.

It is as good a sample of mineral turps as can be made.

The Subscribers to our Journal may, perhaps, notice that the reports of the examinations of Mineral Oils, which have hitherto appeared anonymously, are this month authenticated by the signature of the gentleman to whom we have always entrusted this examination. Many of the samples that have been examined have been sent to us for that purpose, whilst others have been purchased, where possible, at the wholesale depôts, or from recognized agents, of the manufacturers. But, however obtained, the reports of the oils have been made with the most rigid impartiality; neither fear, favour, nor affection has been shown to any manufacturer. The result has been, that whilst we have been doing essential service to our subscribers, we have been offending some of those manufacturers whose samples have been examined, and who have felt aggrieved at the extreme truthfulness with which their properties have been described.

Fortunately, samples of all the oils examined have always been retained for future reference, so that the accuracy of the examination has always admitted of verification. We have thought it desirable, however, that the examination should, for the future, have the additional verification of the signature of the operator.—Ed. C. & D.

SCIENCE

GRAHAM'S RESEARCHES ON THE MOLECULAR MOBILITY OF GASES.

The Master of the Mint, in a paper lately read before the Royal Society, describes the results which his renewed investigation regarding the diffusion of gases has afforded, and expounds certain speculative ideas on the constitution of matter which are in harmony with these results. The paper is a worthy sequel to that on Liquid Diffusion, and will increase the reputation—if that be possible—of our great Chemist. We have only space for a brief notice of those portions of the paper which are interesting in a practical point of view; but we would strongly advise the more scientific of our readers to master the theoretical conclusions at which Mr. Graham has arrived.[*] Every student of Chemistry must be familiar with the author's original experiments on the diffusion of gases. These were performed by the aid of an instrument called the *diffusiometer*, which, as first constructed, was simply a plain cylindrical glass tube, rather less than an inch in diameter and about ten inches in length, closed at one end by a plate of plaster of Paris about one-third of an inch in thickness. A superior material for the porous plate is now found in the artificially-prepared graphite of Mr. Brockendon, of the quality used for making writing-pencils. This material is sold in London in small cubic masses about two inches square. A cube may be easily cut into slices of a millimètre or two in thickness by means of a saw of steel spring. By rubbing the surface of the slice without wetting it upon a flat sandstone, the thickness may be further reduced to about one-half of a millimètre. A circular disc of this graphite, which is like a wafer in thickness, but possesses considerable tenacity, is attached by resinous cement to one end of the glass tube above described, so as to close it and form a diffusiometer. The tube is filled with hydrogen gas over a mercurial trough, the porosity of the graphite plate being counteracted for the time by covering it tightly with a thin sheet of gutta-percha. On afterwards removing the latter, gaseous diffusion immediately takes place through the pores of the graphite. The whole hydrogen will leave the tube in forty minutes or an hour, and be replaced by a much smaller quantity of atmospheric air (about one-fourth), according to the well-known law of diffusion of the gases. During the process, the mercury will rise in the tube, if allowed, forming a column of several inches in height,—a fact which illustrates strikingly the intensity of the force with which the inter-penetration of different gases is effected. The native or mineral graphite is of a lamellar structure, and appears to have little or no porosity. It cannot be substituted for the artificial graphite as a diffusion septum. Unglazed earthenware comes next in value to graphite for this purpose. The pores of artificial graphite appear to be really so minute that a gas *in mass* cannot penetrate the plate at all. It seems to be molecules only which can pass; and these may be supposed to pass wholly unimpeded by friction, for the smallest pores that can be imagined to exist in the graphite must be tunnels in magnitude to the ultimate atoms of a gaseous body. The sole motive agency appears to to be that intestine movement of molecules which is now generally recognized as an essential property of the gaseous condition of matter. According to the physical hypothesis now generally received, a gas is represented as consisting of solid and perfectly elastic spherical particles or atoms, which move in all directions, and are animated with different degrees of velocity in different gases. Confined in a vessel, the moving particles are constantly impinging against its sides, and occasionally against each other; and such collisions take place without any loss of motion, owing to the perfect elasticity of the particles. Now, if the containing vessel be porous, like a duffusiometer, then gas is projected through the open channels, by the atomic motion described, and escapes. Simultaneously the external air or gas, whatever it may be, is carried inwards in the same manner, and takes the place of the gas which leaves the vessel. To the same atomic or molecular movement is due the elastic force, with the power to resist compression, possessed by gases. The molecular movement is accelerated by heat and retarded by cold; the tension of the gas being increased in the first instance, and diminished in the second. Even when the same gas is present both within and without the vessel, and is therefore in contact with both sides of the porous plate, the movement is sustained without abatement; molecules continuing to enter and leave in equal number, although nothing of the kind is indicated by change of volume or otherwise. If the gases in communication be different, but possess sensibly the same specific gravity and molecular velocity, as nitrogen and carbonic oxide do, an interchange of molecules also takes place without any change in volume. With gases opposed of unequal density and molecular velocity, the amount of penetration ceases, of course, to be equal in both directions. These observations are preliminary to the author's consideration of the passage through a graphite plate, in one direction only, of gas under pressure, or under the influence of its own elastic force. It is to be supposed that a vacuum is maintained on one side of the porous septum, and that air or some other gas, under a constant pressure, is in contact with the other side. Now, a gas may pass into a vacuum in three different modes, or in two modes besides that specially investigated by Mr. Graham. It may enter a vacuum by passing through a minute aperture in a thin plate, such as a puncture in platinum foil made by a fine steel point. The rate of passage of different gases is then regulated by their specific gravities, according to a pneumatic law which is well established. Secondly, a gas may enter a vacuum through a capillary tube. In this case the rate of passage is not governed by the specific gravity of the gas. Mr. Graham shows that the third mode of passage, or *molecular diffusion*, is essentially different from both *effusion* and *capillary transpiration*. The effusion movement affects masses of gas, the diffusion movement affects molecules; and a gas is usually carried by the former kind of impulse with a velocity many thousand times greater than by the latter. Again, it appears that the times of passage through the graphite plate have no relation to the capillary transpiration times of the same gases. The penetration of the plate by the various gases appears to be entirely due to their own proper molecular motion, quite unaided by transpiration. It seems to offer the simplest possible exhibition of the molecular or diffusive movement. This pure result is to be ascribed to the wonderfully fine porosity of the graphite. The insterstitial spaces, or channels, appear to be sufficiently small to extinguish transpiration, or the passage of masses entirely. The graphite becomes a molecular sieve, allowing molecules only to pass through. With a plate of stucco, the penetration of gases under pressure is very rapid, and the volumes of air and hydrogen passing in equal times are as 1 to 2·891, which is a number for hydrogen intermediate between its transpiration volume 2·04 and diffusion volume 3·8; showing that the passage through stucco is a mixed result. With a plate of biscuit ware, 2·2 millimètres in thickness, the volume of hydrogen rose to 3·754 (air = 1), approaching closely to 3·8, the molecular ratio. The rate of passage of gas through graphite appeared also to be closely proportional to the pressure. Further, hydrogen was found to penetrate through a graphite plate into a vacuum, with sensibly the same absolute velocity as it diffused into air; establishing the important fact, that the impelling force is the same in both movements. The molecular mobility may therefore be spoken of as the diffusive movement of gases; the passage of gas through a porous plate into vacuum, as diffusion in one direction, or single diffusion; and ordinary diffusion, or the passage of two gases in opposite directions, as double, compound, or reciprocal diffusion.

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[*] The paper is printed in the *Athenæum* of August 8.

A partial separation of mixed gases and vapours of unequal diffusibility can be effected by allowing the mixture to permeate through a graphite plate into a vacuum. As this method of analysis has a practical character and admits of wide application, Mr. Graham proposes to distinguish it by the special term ATMOLYSIS. The amount of the separation is in proportion to the pressure, and attains its maximum when the gases pass into a nearly perfect vacuum. A variety of experiments have been made by Mr. Graham on this subject; of which perhaps the most interesting were those upon the concentration of the oxygen in atmospheric air. When a portion of air confined in a jar is allowed to penetrate into a vacuum through graphite or unglazed earthenware, the nitrogen should pass more rapidly than the oxygen in the proportion of 1·0668 to 1, and the proportion of oxygen be proportionally increased in the air left behind in the jar. The increase in the oxygen actually observed when the air in the jar was reduced from 1 volume to 0·5 volume, was 0·48 per cent.; to 0·25 volume, was 0·98 per cent.; to 0·125 volume, was 1·54 per cent.; to 0·0625 volume, was 2·02 per cent.; or, the oxygen increased from 21 to 23·02 per cent. in the last sixteenth part of air left behind in the jar. The most remarkable effects of separation are produced by means of the *tube-atmolyser*. This is simply a narrow tube of unglazed earthenware, such as a tobacco-pipe stem, two feet in length, which is placed within a shorter tube of glass and secured in its position by corks, so as to appear like a Liebig's condenser. The glass tube is placed in communication with an air-pump, and the annular space between the two tubes is maintained as nearly vacuous as possible. Air or any other mixed gas is then allowed to flow in a stream along the clay tube, and collected as it issues. The gas so atmolysed is of course reduced in volume, much gas penetrating through the pores of the clay tube into the air-pump vacuum; and the slower the gas is collected, the greater the proportional loss. In the gas collected, the denser constituent of the mixture is thus concentrated in an arithmetical ratio, while the volume of the gas is reduced in a geometrical ratio. In one experiment the proportion of oxygen in the air after traversing the atmolyser was increased to 24·50 per cent., or 16·7 upon 100 oxygen originally present in the air. With gases differing so much in density and diffusibility as oxygen and hydrogen, the separation is of course much more considerable. The explosive mixture of two volumes of hydrogen and one volume of oxygen, gave oxygen containing only 9·3 per cent. of hydrogen, in which a taper burned without explosion; and with equal volumes of oxygen and hydrogen, the proportion of the latter was easily reduced from 50 to 5 per cent.

PHOTO-LITHOGRAPHY.

Galignani's Messenger notices a communication lately sent in to the Academy of

Sciences by M. Morvan, in which he describes a method of his for obtaining direct photographic impressions upon stone, and which he can afterwards print off. He first gives the stone a coating, applied in the dark, of a varnish composed of albumen and bi-chromate of ammonia. Upon this he lays the right side of the image to be reproduced, whether it be on glass, canvas, or paper, provided it be somewhat transparent. This done, he exposes the whole of the action of light for a space of time varying between thirty seconds and three minutes if in the sun, and between ten and twenty-five minutes if in the shade. He then takes off the original image, and washes his stone, first with soap and water, and then with pure water only, and immediately after inks it with the usual inking-roller. The image is already fixed, for it begins to show itself in black on a white ground. He now applies gum-water, lets the stone dry, which is done in a few minutes, and the operation is complete ; copies may at once be struck off by the common lithographic process. The process may be explained thus :—The varnish has been fixed and rendered insoluble by the action of light wherever it could penetrate ; but, on the contrary, all the parts of the varnish protected by the dark portions of the image still retain their solubility, and are, therefore, still liable to be acted upon by the soda and acid contained in the soap, of which they moreover retain a part of the substance. The advantages of the process may be briefly summed up as follows :—Simplicity and rapidity in the operation, exactness in reproducing the design, no need of negative impressions on glass or paper, the positive original comes out positive, the original design or model is not spoilt during the process, and the cost is trifling, owing to the cheapness of the substances. The process is very similar to the carbon processes of some of our English photographers.

PREPARATION OF SOLID CITRATE OF MAGNESIA.*

The following process, devised by M. de Letter of Brussels, is said to give a citrate of magnesia completely soluble in cold water, and which preserves this quality indefinitely :—

Take of Citric acid 20 parts. Carbonate of magnesia 12 parts.

Pulverize the acid finely, and mix it intimately with the magnesia, also in fine powder. Abandon the mixture at the ordinary temperature during four or five days, or until it ceases to manifest any reaction when a particle is thrown into water. During the reaction, which slowly goes on, the powder swells up and gradually assumes the aspect of a spongy mass. This is dried at the temperature of 86° Fahr., pulverized, and the powder preserved in closely-stopped phials.

According to M. de Letter, the solubility of this preparation is due to the absence of water, which in sufficient quantity favours the formation of an insoluble hydrate. The slowness of the operation is due to there being no vehicle to assist the reaction (except the small amount of water of crystallization in the citric acid), as well as to the low temperature.

REVIEWS

A BATCH OF MEDICAL BOOKS.

A Manual of the Practice of Medicine. By G. Hilaro Barlow, M.A., M.D. Second Edition. 12*s.* 6*d.*

A Medical Vocabulary. By R. G. Mayne, M.D. Second Edition. 8*s.* 6*d.*

Compendium of Domestic Medicine. By John Savory. Sixth Edition. 5*s.*

The Medical Remembrancer ; or, Book of Emergencies. By E. B. L. Shaw. Fourth Edition. Re-written by Jonathan Hutchinson. 2*s.* 6*d.*

London : John Churchill and Sons.

"I am of opinion that a Chemist may, in his shop, so far prescribe for a customer as to advise with him as to the nature and quality and mode of application of the medicines which he is about to sell, and also as to which of his commodities will best suit the requirements of his customer. He may listen to his customer's statements as to the reasons for his wishing to become a purchaser, and may suggest to and advise him as to which of his commodities will be most suitable and beneficial to the customer, or may dissuade him from purchasing or taking that which a customer in his ignorance may have applied for." This extract from the cautiously-expressed opinion of Mr. Thompson Chitty as to the right of Chemists and Druggists to prescribe, may fitly serve as an introduction to our remarks on the above-named works, for it clearly defines the limits within which a Chemist may legally and usefully act as a medical adviser. We have no desire to see this sphere of action extended. We think it is wide enough to include every requirement in counter-practice. On the other hand, we are quite sure that it is not too wide, and are prepared to resist with all the strength we can command every attempt that may be made to prevent Chemists prescribing in simple cases.

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* From the *Amer. Jour. of Pharmacy*.

Being of opinion that every Chemist and Druggist ought to be competent to give advice to his customers, we cheerfully comply with a request that has been repeatedly made by different subscribers, and proceed to notice a few good medical books. The first on our list is one of the series of cheap and excellent manuals published by Mr. Churchill—a series which includes Fownes' *Chemistry*, Royle's *Materia Medica*, Golding Bird's *Natural Philosophy*, Carpenter's *Physiology*, Erasmus Wilson's *Anatomists' Vade-Mecum*, and other equally popular student's works. When we say that Dr. Barlow's "Manual of the Practice of Medicine" is as good in its way as any of its fellows, we award to it the highest possible praise. The author, as senior physician to Guy's Hospital, has had great experience in the practice of medicine, and his opinions even when differing from those generally entertained must be received with respect. The system of medicine unfolded by Dr. Barlow is generally admitted to be trustworthy, philosophical, and thoroughly practical. It would be absurd to attempt to enumerate the subjects treated of in the 700 pages of this well-written work. We need only say that the supposed causes, the signs, and the treatment of the various classes of disease are discussed or described with great clearness, and with a fulness of detail not common in hand-books intended for students.

Dr. Mayne's work deserves a place in the library of every lover of science. Its title describes its nature and scope:—"A Medical Vocabulary; or, An Explanation of all Names, Synonymes, Terms, and Phrases used in Medicine and the relative branches of Medical Science, giving their correct derivation, meaning, application, and pronunciation: intended specially as a Book of Reference for the Young Student." We have referred to this work hundreds of times, and have always obtained the information we required. The arrangement is admirable. Every name, term, or phrase is set down with the marks for its proper pronunciation,—the long, short, and acute accents: if a Latin word, simple or compound, its declension is given; next (in parenthesis) its derivation, and the reason therefor where the connexion may not be very apparent; then its character and general and particular meaning, with the corresponding word in Latin or English; lastly, its synonymes and a reference to such, or to a term, &c., in some way allied to or connected with it. The language used in every branch of Natural, Experimental, and Descriptive Science, from Anatomy to Zoology, is thus fully interpreted and clearly elucidated. Chemical, Botanical, and Pharmaceutical terms are to be found on almost every page. The work is beautifully printed in a small but clear type, and consists of no fewer than 439 pages, each of which affords about thirty definitions.

Mr. Savory's "Compendium of Domestic Medicine and Companion to the Medicine Chest" has rapidly reached a sixth edition, and is in every respect worthy of its great success. It is intended as a source of easy reference for clergymen, master mariners and travellers, and for families resident at a distance from professional assistance; but it is admirably adapted as a handbook for country Chemists. It gives plain directions for the employment of medicines, with their properties and doses, and brief descriptions of the symptoms and treatment of diseases. The large selection of prescriptions contained in the work ought to secure for it a large sale among Chemists and Druggists.

The last book of our batch is a very little one, but its authors have contrived to cram into its 112 tiny pages a vast amount of useful knowledge. It concisely points out the *immediate treatment* to be adopted in cases of poisoning, drowning, apoplexy, burns, and other accidents; it gives the tests for all the principal poisons, and, in fact, explains what is to be done in all special cases of emergency. Let us put it to the test. A fortnight ago a woman poisoned herself, not with oxalic acid, laudanum, arsenic, or other common life-destroyer—but with potash. Let us see whether Mr. Hutchinson notices this unusual poison. The articles are arranged alphabetically, so we have no difficulty in finding what we want. Here it is:—

"POTASH (PEARL ASH, SOAP LEES.)—*Symptoms.*—Prostration, vomiting, colic, and diarrhœa. If taken in a caustic form, death may ensue very quickly, just as when a strong acid has been swallowed; but if not concentrated, long exhaustion, emaciation, &c. may precede death. *Treatment.*—Vinegar, lemon juice, oil, and demulcent drinks."

This extract will show that "Shaw's Medical Remembrancer" is a book which ought to be within the reach of every Chemist.

A Dictionary of Chemistry, &c. By HENRY WATTS, B.A., F.C.S. Part VI. Chyle—Conglomerate. Longmans. 5*s.*

THIS part completes the first volume, and contains, in addition to the usual quantity of matter, an index to the 3,000 headings which have already appeared. The subjects which in the alphabetical arrangement come between Chyle and Conglomerate are numerous and varied. Of those connected with Pharmacy, and therefore specially interesting to our readers, we may note the following:—Cinchona Bark, Cinchonidine, and Cinchonine; Citric Acid and the Citrates; the botanical genera Citrus, Cochlearia, and Colchicum; the vegetable principles Codeine, Colchicine, Colocynthin, and Colombin; the useful preparation Collodion, and the processes of Clarification and Concentration. The articles under these heads are full and suggestive. The important subject of Classification is treated by Mr. G. C. Foster in a masterly paper which throws much light upon the different modes in which chemical elements may combine. A table showing the classification of bodies according to types is included in the article. The treatise on Combustion—once regarded as the grand and essential phenomenon of Chemistry—is by the Editor, who thoroughly exhausts the subject. The methodical arrangement of facts in this article, and the clear and concise style which distinguishes it, give us a higher opinion than ever of Mr. Watts's rare talents. Cobalt, Coal, and Coal-gas form the subjects of long and important articles in this part.

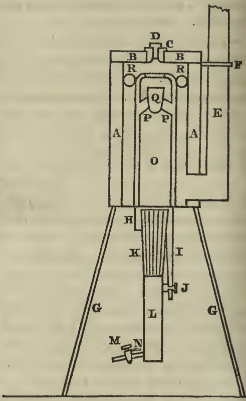
NEW GUN METAL.

Messrs. Deville and Caron have lately been making experiments on the properties of a new gun metal, a compound of silicium and copper. When copper contains rather less than five per cent. of silicium, it presents a fine bronze colour, is fusible, and rather harder than bronze,—but is perfectly ductile, and can be readily worked without clogging the tools as bronze does. Its tenacity is remarkable, being equal to that of iron. Silicium is the basis of sand, and the manufacture of its compounds with copper may be made by fusing together a mixture of sand, sodium, and copper, with some common salt and fluor spar as flux. This process affords another example of the great use of sodium in the metallurgic arts; the commercial manufacture of aluminium and magnesium being entirely dependent on the cheapness of sodium for being economically conducted.

GORE'S NEW GAS FURNACE.

This ingenious and admirable furnace was constructed to supply a temperature equal to the fusing of cast iron, by means of coal gas and atmospheric air, without the use of a bellows or tall chimney. It is intended for scientific research, but its safety, simplicity, and efficiency have already led to its use by metal workers.

The smallest furnace, which consumes 33 feet of coal gas (value twopence) per hour, will melt eight ounces of copper, or six ounces of cast iron. The next sized furnace consumes about twice that quantity of gas, and will melt forty-five ounces of copper, or forty ounces of cast iron. It is constructed as follows:—A is a cylinder of fire-clay about 9 inches high and 6 inches diameter, open at both ends, and with a hole in its side near the bottom to lead into the chimney; it is covered by a movable plate of fire-clay, B, with a hole in its centre for introduction of the crucible or of substances to be melted: this hole is closed by a perforated plug of fire-clay, C, for access to the contents of the crucible; and that again is closed by another stopper of clay, D. E is a chimney of sheet iron about five or six feet high, kept upright by a ring of iron, F, attached to the top of the furnace.



The fire-clay cylinder is enclosed in a sheet-iron casing with a bottom of iron, to which are fixed three iron legs, G. An iron tube, H, with a prolongation, I, supports by means of the screw, J, the burner K and its tube L, which is open at both ends. Gas is supplied to the burner by means of the tap, M, which has a small index, N, attached to it for assistance in adjusting the gas.

Inside the larger cylinder is another fire-clay cylinder or cupola, O, with open ends, and with three projections of fire-clay, P, for supporting the crucible, Q; it is kept steady by means of three clay marbles, R.

The gas-burner is a thin metal cylinder deeply corrugated at its upper end, with the corrugations diminishing to nothing at its lower end.

The action of this furnace is as follows:—Gas is admitted to the open tube L by the tap M; it there mixes with air to form a nearly explosive mixture, which ascends through the burner and burns in the clay cylinder O, being supplied with the remainder of air necessary to complete combustion through the tube H. The flame and products of combustion pass up through the cylinder O, and then downwards outside into the chimney, the point of greatest heat being at Q.

With one ounce of copper put into the cold furnace, and the gas lighted and properly adjusted, the copper generally begins to melt about the tenth or twelfth minute, and is completely melted by the fifteenth. With the heat well up, one ounce of copper has been melted in it in $2\frac{1}{4}$ minutes, one ounce of cast iron in 3 minutes, five ounces of copper in $4\frac{1}{4}$ minutes, and three ounces of cast iron in 5 minutes. With the smaller hole in the top of the furnace open, one ounce of copper has been melted in $3\frac{1}{2}$ minutes; and several ounces of copper have been kept in fusion for upwards of half an hour, and may be kept so for any length of time: cast iron has also been fused and kept melted under the same conditions.

When it is desirable to perfectly avoid the contact of air with the fused substance during manipulation, a thin and narrow ring of fire-clay should be placed upon the top of the tube O to contract its opening; the flame then completely closes over the top of the crucible and prevents access of air. A proper adjustment of gas, together with exclusion of air in this manner, enables a perfectly bright surface of melted copper, or even tin, to be continuously maintained, from which the images of the parts above are clearly reflected.

COMMERCIAL MANUFACTURE OF MAGNESIUM.

Mr. Sonstadt has recently patented a process by means of which he prepares the metal magnesium, the base of the earth magnesia. The process adopted is a great improvement on that of Deville, inasmuch as it enables the magnesium to be obtained commercially and in quantity, the practical difficulties which hitherto restricted the manufacture being obviated. Magnesium as thus obtained promises to effect as great a revolution in some of the arts as aluminium has done, inasmuch as its properties are very remarkable, and its alloys, hitherto unworked, hold out high promise of rich reward to those who investigate their properties. Magnesium in its pure state is a very light metal, being considerably less than twice the specific gravity of water: it is, in fact, the lightest known metal that can remain in contact with air or water without rapid oxidation. Magnesium has a fine white silvery lustre; it is malleable and ductile to a considerable extent. A fine wire of the metal, heated in the flame of a candle, takes fire, and burns with an intense white light, of such brilliancy that the various shades of colour are shown with the same distinctness as by the direct light of the sun.

Mr. Sonstadt's process, by which this metal is prepared on a manufacturing scale, may be briefly described as follows:—A mixed solution of the chlorides of magnesium and sodium is evaporated to dryness, and then heated to redness; the fused mass remaining is then decomposed by being heated with metallic sodium in close iron vessels, from which the air is excluded, the use of clay crucibles and chloride of ammonium being especially avoided. Large masses of the metal made by this process have been exhibited at several of the scientific meetings during the last few weeks.

THE MONTH

UNITED SOCIETY OF CHEMISTS AND DRUGGISTS.

MEETING AT LEEDS.

A meeting of the Leeds members of this Society, convened by circular, was held at Wharton's Hotel, on Wednesday, the 15th ult., for the purpose of considering the 56th and 57th sections of the proposed New Medical Act. George Reinhardt, Esq., Chairman of the district, presided. The Chairman was glad to find that the Chemists and Druggists of Leeds were determined to oppose the proposed New Medical Act, which he thought was an attempt to interfere with the trade in a most arbitrary and unjust manner.

Mr. B. Taylor, although aware that no Bill could be introduced into Parliament this Session, thought it very necessary that the Society should be prepared to meet this attempted innovation of our rights. He had much pleasure in proposing, "That in the opinion of this meeting so much of the proposed New Medical Act as relates to Chemists and Druggists is calculated to do great injury to our trade, and therefore this meeting pledges itself to use every effort to prevent the same becoming law." Mr. E. Yewdall briefly seconded the resolution, which was carried unanimously. Mr. J. A. Horsfield considered that the sooner Chemists and Druggists organized themselves for resisting this attempt of the Medical Council to make them subservient to their laws, the more likely would they be of success, and therefore proposed—"That a Committee consisting of the Chairman, Secretary, and Messrs. B. Taylor and E. Yewdall, communicate with G. S. Beecroft, Esq., M.P., and E. Baines, Esq., M.P., requesting early notice of the introduction of the proposed Bill into the House of Commons, and further requesting them not to give any promise of support to such a Bill until they had heard the Society's reasons adverse thereto." This resolution was seconded by Mr. J. Walker, and carried unanimously. A vote of thanks was tendered to the Chairman, which was duly acknowledged, and the meeting terminated.

The Secretary (Mr. J. Aldridge) having communicated with G. S. Beecroft, Esq., has received the following reply:—

"Gloucester-terrace, Regent's-park,
"July 17th, 1863.

"*Medical Act.*

"Dear Sir,—I am favoured with your letter, enclosing circular. I beg you will assure the United Society of Chemists and Druggists that it will give me much pleasure to attend to their wishes. You will be aware that it is now too late for anything to be done in the matter this Session.

"I am, dear Sir,
"Yours, faithfully,
"George S. Beecroft.

"J. Aldridge, Esq."

COMMITTEE MEETING IN LONDON.

Since our last publication the Central Committee of the United Society have met and unanimously agreed to hold a public meeting of the trade in London, at any early date, for the discussion of the proposed Amendment of the Medical Act. They have also resolved to wait in deputation upon the Medical Council, to ascertain whether it is the intention of the Council to persevere; and if so, whether they agree to the principle and mode of examination as set forth in the proposed Act of Incorporation by the United Society on behalf of the whole trade, and are willing to notice the same in their proposed New Medical Act.

MANCHESTER BRANCH—COMMITTEE MEETING.

A Committee meeting, presided over by Mr. Alderman Goadsby, ex-mayor of Manchester, and chairman of the District Association, was held on the 22nd July, at the Crown Hotel, Booth-street, Manchester, to take into consideration the "New Medical Bill affecting Pharmacy." Nearly all the members of the numerous committee were present, and the neighbouring towns were represented by gentlemen from each. The Bill was freely discussed in all its bearings, and several forcible speeches were delivered upon the absurd and unjust proposal of the Medical Council to deprive so very numerous and useful a body of their fellow-citizens of their legal rights to dispense medicines, and to prevent them following that calling in which they hitherto have so honourably acquitted themselves. All who spoke expressed the determination of Chemists and Druggists not only to maintain their rights and privileges intact, but to agitate until the United Society of Chemists and Druggists obtain such an act of incorporation as shall guarantee to the public efficient dispensers of medicine, and for ever put an end to the insidious and selfish attacks which are made periodically, and which, if successful, would reduce to penury a large number of worthy men and their families. The desirability of calling a public meeting was discussed, when Mr. Slugg moved, and Mr. Holt seconded, the following resolution:—"That a meeting of the Chemists and Druggists of Manchester and the neighbouring towns be convened at an early date, to take into consideration the "New Medical Bill." The time for holding such meeting to be fixed by the Chairman and Hon. Secretary." The Chairman, previous to putting the motion, said it gave him great pleasure to preside over so influential and enthusiastic a meeting of his fellow-tradesmen; it augured well for the cause, and if they persevered in their endeavours he had no doubt success must be the reward. He urged each individual to exert himself by increasing the numbers and efficiency of the Association; and heartily concurred in the proposal to hold a general meeting, where the objects of the Society and the provisions of the proposed New Medical Bill could be fully discussed in public. He assured the Association of his hearty sympathy with the cause, and that they might at all times depend on his cordial co-operation and support. The motion, upon being submitted to the meeting, was carried unanimously, as was also the following:—Moved by Mr. Towle, seconded by Mr. Blayne—"That Mr. Alderman Dakin, President, and Mr. Buott, Secretary of the United Society of Chemists and Druggists, be invited to attend the proposed meeting. A vote of thanks to the Chairman, which was carried by acclamation, brought a highly satisfactory meeting to a close.

MEETING AT SHEFFIELD.

A meeting of the trade was held at Sheffield on Thursday evening, to promote the principles and objects of the United Society of Chemists and Druggists, and to protest against the interference of the Medical Council with their business. Dr. J. C. Hall, one of the most popular physicians of Sheffield, presided on the occasion. We will give full particulars of this important meeting in our next publication.

LAW AND CRIME.

THE EXCELSIOR WHITE SOFT SOAP.—BRAHAM *v.* BUSTARD.

This cause, which came before Vice-Chancellor Sir W. P. Wood on the 3rd inst., was a motion to restrain the defendants from selling soap under the name of "the Excelsior white soft soap."

The plaintiffs, who were soap manufacturers in London, had invented and introduced into the market a certain soap under the name of "the Excelsior white soft soap." It appeared that white soft soap had before that time been in little or no demand in the trade, but that a great impulse had been given to the manufacture by the introduction of the particular soap made by the plaintiffs, which became well known to the trade as the Excelsior, &c. The defendants were manufacturing chemists at Manchester. Some time since, the Manchester agent of the plaintiffs informed them of the value of the plaintiffs' article, and of the reputation acquired by it under the particular name, offering them, at the same time, a sub-agency for its sale on behalf of the plaintiffs. The offer, however, was declined by the defendants. The plaintiffs' case was that the defendants had taken advantage of the information so given by their agent to the defendants, and had manufactured a white soft soap, and offered the same for sale in Manchester and elsewhere, under the name of Excelsior white soft soap. After some correspondence, in which the defendants admitted that they had first heard of white soft soap and commenced its manufacture in consequence of the information given by the plaintiffs' agent, the present bill was filed to restrain the defendants from manufacturing and selling any soap under the name used and appropriated by the plaintiffs, and an injunction was now moved for.

The defendants' case was, that the plaintiffs were not entitled to be protected in the name of "Excelsior" as applied to soap, inasmuch as that name indicated quality only, and, as was evidenced by numerous advertisements (produced in court), was used in different trades, and applied to trousers, pens, lucifer matches, &c., all described as "Excelsior." It was also contended that the Court ought only to interfere to protect the legitimate business of persons engaged in trade, and would not allow itself to be made the medium for puffing a tradesman's wares.

Mr. W. M. James and Mr. E. Charles appeared for the plantiffs in support of the motion; Mr. Rolt and Mr. E. Lake Russell for the defendants in opposition.

The Vice-Chancellor said that the conduct of the defendants in this case entitled them to no consideration at the hands of the Court. It appeared from the evidence that the plaintiffs had introduced into the soap-market what might be called a new article, under the name of "the Excelsior white soft soap." The defendants in their own letter and evidence spoke of the article as a totally new thing. The plaintiffs, wishing to assume a distinctive title, took this name; and it appeared that their article had become known to the trade and to purchasers under that name. The defendants, as they themselves admitted, having heard of the success of the plaintiff's article under that name, began to make a white soft soap, which they sold under the name of "the Excelsior white soft soap." He was clearly of opinion that where a new article had been introduced into the market, and was called by and acquired a reputation under a certain name, the Court would protect the use of that name. It was not unimportant to observe that the plaintiffs had sold their article not simply as "Excelsior white soft soap," but as "the Excelsior white soft soap;" so that the name did not simply describe quality, but was the surname of the plaintiffs' article. The Court, he agreed, did not interfere in cases of mere puffing; but it would check fraud wherever it was found. Under the circumstances, he was satisfied that the defendants had adopted this name for the purpose of obtaining some of the plaintiffs' custom, and the injunction would be granted to restrain the defendants from selling any soap under the name, "the Excelsior white soft soap," or any other name so as to lead to the belief that the article sold by them was that manufactured by the plaintiffs.

GENERAL NEWS.

POISONING BY COMMON POTASH.

Dr. Lankester held an inquest on the 28th ult., in Clerkenwell, on the body of Eliza Bartlett, aged 53. The deceased, it appeared, was a woman of intemperate habits. On Thursday afternoon the door of her room in Red Lion-yard was found to be locked, and her son, a little boy, forced it open, and found his mother crouched up on the bed. She exclaimed, "Police, police! I have poisoned myself." The boy found a pot with some hard substance in it, and a cup which had been used. A neighbour sent the hard substance to a chemist on Mount Pleasant, and requesting his attendance, but who refused to go, and told the boy to throw the stuff away. He went into Leather-lane, and at a druggist's shop was told it was potash. At length Mr. Gibson, a surgeon in Bagnigge-wells-road, was sent for, and immediately attended. The poor woman died on Saturday night, and Mr. Gibson, on making a post-mortem examination, found the body highly inflamed from the burning nature of the potash. The coroner said it was the first case he had ever heard of; he was not aware that potash was ever taken to destroy life. Mr. Gibson said it was sold at oilshops, and was used to remove paint. Verdict—"Temporary insanity." The *Chemical News* in noticing this case exclaims, "Here is another article to be added to the list of poisons in the next Bill, and to be only retailed in a hexagonal bottle with five sides fluted!"

ADULTERATED YEAST.

On the 20th ult. the local Board of Health at Hull seized and conveyed to the Board's warehouse 165 baskets of Dutch yeast, which were being landed from the steamer *Ocean*

Queen, from Rotterdam. The yeast was taken possession of by the inspector because the bags bore the same brand as those from which several samples had been taken and sent to Dr. Letheby, Sanitary Inspector of the City of London, for analysis, the doctor having stated that he had found the samples highly adulterated. The importers of the yeast objected to the jurisdiction of the inspector, and, in consequence, a meeting of the sanitary committee of the local Board of Health was called. A deputation from the importers waited upon the committee. They admitted that the yeast was adulterated, but expressed a strong wish for the committee to allow it to pass for that time, promising to stay any further importation of the adulterated yeast. The committee refused to do so, and application was at once made to the stipendiary magistrate (Mr. Travis) for an order for the destruction of the yeast. The importers engaged Mr. Pettingell, solicitor, who contended that as Dutch yeast was not a vegetable it did not come under the section under which the application for the order for its destruction was made. The chairman of the committee (Alderman Mayfield) stated that samples of the yeast would be sent to Dr. Letheby for analysis, and if the case was adjourned he would send for Dr. Letheby to come down. The case was accordingly adjourned until Wednesday. On that day the application was renewed, and Dr. Letheby was in attendance. He stated that he had examined six samples of Dutch yeast which had been sent to him by the Monday night's post. He found that the first of these contained 58 per cent. of moisture, 13 per cent. of clay, and 31 per cent. of dried yeast; the second sample contained 60 per cent. of moisture, 12½ of clay, and 31 of dried yeast; the third contained 62½ per cent. of moisture, 8½ of clay, and 23 of dried yeast; the fourth contained 58 per cent. of moisture, 15 of clay, and 13 of dried yeast; the fifth contained 56 per cent. of moisture and 15 of clay, making 35 of clay and dried yeast: the sixth sample contained 61 per cent. of moisture and 10½ of clay, making 28 per cent. of clay and dried yeast. Dutch yeast was a vegetable. It was also a necessary article of consumption. Man must have leavened bread. He could only leaven it with yeast, and it was in consequence indispensable. Mr. Pettingell contended that the Board had no *locus standi*, and that Dutch yeast was not a vegetable within the meaning of the Act. The magistrate said that it had been clearly proved that yeast was indispensable, and it had been further proved that the yeast seized was highly adulterated, and he should therefore grant the order for its destruction.

PETROLEUM NOT UNHEALTHY.

During the last two or three years, numerous quantities of petroleum have been imported into Liverpool and stored in various parts of the town; and incessant have been the squabbles and recriminations which have taken place between the owners of the article in question and the residents of districts where the oil is stored. The latter have complained bitterly, both in memorials to the authorities and through the medium of the press, of the offensive odour of petroleum, and have insisted that it was not only disgusting to all the senses, but positively injurious to health. This, however, is strongly denied by the importers and dealers; and finally to settle the question the Town Council recently instructed Dr. French, the medical officer of health, to report upon the subject. Dr. French now states that after making minute inquiries in portions of the town where the alleged nuisance of petroleum is most loudly complained of, he finds that so far as the health of the inhabitants is concerned there are no just grounds of complaint, and that in no districts of the borough did he find the residents generally, and particularly the children, more healthy and better-looking than those in which petroleum is stored. "After the report," remarks a contemporary, "the inhabitants will probably have to put up with an abominable stench because they cannot prove that the nauseous gas shortens their days, or makes their features look pale and wan."

POISONING BY CYANIDE OF POTASSIUM.

An inquiry was held by Mr. H. Raffles Walthew, deputy coroner, at the Coach and Horses tavern, Fann-street, Aldersgate-street, on Friday, the 31st ult., respecting the death of James Hyde, aged twenty-one. Dr. H. Letheby, Professor of Chemistry at the London Hospital, said that he received the stomach of the deceased from the Coroner's officer. It contained nine ounces of a red liquid, but no trace of food. By distillation he obtained from that liquid five ounces of a very strong solution of prussic acid—enough to kill ten persons. There was an alkali present, which led him to infer that the deceased had swallowed a quantity of cyanide of potassium. He had taken it on an empty stomach, and death must have been instantaneous. Cyanide of potassium was commonly used by photographers and electro-platers. It contained prussic acid, and was a deadly poison. It was commonly sold. The Coroner said that it would certainly appear a futile precaution to interdict the sale of arsenic if such poisons as cyanide of potassium and prussic acid were to be sold without any restraint. Dr. Letheby said that arsenic was a poison that could easily be administered to an unsuspecting person, but the other poisons had such a bitter taste and so powerful an odour that it would be next to impossible to administer them surreptitiously without immediate detection. Except by suicides, these poisons were seldom taken, and therefore legislative interference was not so necessary as in the case of arsenic. The cyanide could be procured in either a liquid or a solid form. The Coroner said that it would clearly be desirable that the vendors of the poison should exercise some vigilance with regard to the persons to whom they sold so dangerous a poison. Police-constable Leather, 6 G, said that deceased had been in the habit some years ago of practising photography, and no doubt on that account experienced no difficulty in procuring the poison. The jury returned a verdict of "Suicide while of unsound mind."

DEATH OF DR. NELIGAN.

Dr. Neligan, of Dublin, expired on the night of the 23rd ult., in the forty-eighth year of his age. As a practitioner he had arrived almost at the head of his profession, and he had earned for himself a high reputation by his medical writings, particularly by his popular work on "Medicines, their Uses and Mode of Administration." He was chairman of the Jury in Class 2, Section B., "Medical and Pharmaceutical Products and Processes," at the International Exhibition last year. In personal appearance he was one of the finest men in Dublin, the picture of health, and the news of his death took the public quite by surprise.

THE PYTHONIC FRIENDS OF SCIENCE.

The following letter, expressing the ideas of a vigorous English mind, was lately printed in the columns of our leading daily contemporary :—

"Sir,—Science and Art are words which of late have become extremely familiar and, I may add, even fashionable. Although no two things can be more unlike each other, yet they are now-a-days always coupled together, as if the strongest affinity existed between them. The Arctic Circle and the Torrid Zone cannot be wider apart or in stronger contrast, for Science is frigidly logical and Art hotly emotional. Notwithstanding "that wearying and mournfully monotonous drone about Science," to which you refer in your leader to-day, I crave your permission, Sir, to sound a dismal note or two on the same subject. There are such beings as would be friends who, unbidden and undesired, obtrude their civilities upon you with a degree of officious pertinacity which is as remarkable as it is repulsive. The persons will have no "nay," and positively smother you with their kind attentions. They are as difficult to shake off as a boa constrictor which has got you in his folds. They may be amiable and well-intentioned, but their enmity is less to be dreaded than their friendship. Now, Sir, it appears that Science has a host of friends, or what I will venture to term the Pythonic type. They have started up as quickly as mushrooms, and who shall dare to pry into the cause of their origin? There is a cause for everything, even for their appearance, and it is not a mysterious one.

"It has been gravely declared that Science in this country is but the growth of yesterday, having been imported from Germany, and tenderly nurtured by the magnates of the realm. Among the noisy and turbulent throng in the House of Commons on Thursday last one noble lord stood up, and, with exultation, announced that Science had at length found its way into that democratic assembly through the individual exertions and influence of one now no more. From the language which this scion of a great house employed, it might be inferred that Science had been previously almost unknown in England. The noble lord, no doubt, spoke according to his knowledge; but it possibly escaped his memory that a man named Isaac Newton once existed. Without justly exposing ourselves to the charge of presumption, we might also boast of a few other names of distinction among the dead as well as the living.

"There is, Sir, another point upon which the public appear to be much misinformed —namely, that Science is in the receipt of large sums from the State. The annual amount voted out of the taxes for Science and Art is unquestionably large; but it should be borne in mind that, comparatively, only a small portion is really devoted to Science, while Art takes the lion's share. Let it be so by all means. True Science to be worth anything must never become the creature of State bounty. We want no Institute with its salaried members and its eternal jobbing. We need no patronizing Mecænas, whether from the high-born or the self-exalted. What Science earnestly desires is to be let alone, that she may follow her destined course quietly, modestly, and without molestation. She especially loathes the Pythonic embrace of meddlesome persons who, knowing nothing of her, yet profess an intimate acquaintance with her and a tender regard for her welfare, solely with the object of puffing themselves into notoriety. She would have none of them, for she disdains them utterly.

"It must fairly be admitted that the House of Commons has during many years shown every disposition to treat Science and Art liberally, and no vote of supply has been less grudgingly passed than that for their promotion. Year after year the vote has grown at an accelerated pace, and if great care be not exercised some revulsion on the part of the House of Commons with respect to this vote may be naturally expected. But it particularly behoves us to beware of pretenders. There can be no doubt that the numbers of the adverse vote on Thursday last respecting the International Exhibition building were largely increased on account of the conduct of certain persons who have contrived to render themselves singularly unpopular, and who, it was apprehended, might thrust themselves into positions of dignity and responsibility for which they are wholly unqualified. "I am, Sir, your obedient servant,

"July 4." "Y."

PARLIAMENTARY INTELLIGENCE.

POISONED GRAIN BILL.

This bill passed into a law at the close of the Session. As amended in Committee it exhibits none of the objectionable features which Chemists and Druggists so justly complained of, but simply prohibits the sale and use of poisoned grain, seed, or meal. We print the entire Bill for the guidance of our readers :—

"Whereas it is expedient to prohibit the sale and use of poisoned grain, seed, or meal: Be it enacted by the Queen's most Excellent Majesty, by and with the advice and consent of the Lords spiritual and temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:—

"1. This Act may be cited for all purposes as 'The Poisoned Grain Prohibition Act, 1863.'

"2. Every person who shall offer or expose for sale or sell any grain, seed, or meal which has been so steeped or dipped in poison, or with which any poison or any ingredient or preparation has been so mixed as thereby to render the same poisonous, and calculated to destroy life, shall in either case for every such offence, upon summary conviction, as hereinafter provided, forfeit any sum not exceeding ten pounds.

"3. Every person who shall knowingly and wilfully sow, cast, set, lay, put, or place, or cause to be sown, cast, set, laid, put, or placed, into, in, or upon any ground or other exposed place or situation, any such grain, seed, or meal which has been so steeped or dipped in poison, or with which poison or any ingredient or preparation has been so mixed as thereby to render such grain, seed, or meal poisonous, and calculated to destroy life, shall, upon a summary conviction thereof as hereinafter provided, forfeit any sum not exceeding ten pounds.

"4. Nothing in this Act shall prohibit the offering or exposing for sale or selling or the use of any solution or infusion, or any material or ingredient for dressing, protecting, or preparing any grain or seed for bonâ fide use in agriculture only, or the sowing of such last-mentioned grain or seed so prepared.

"5. All penalties imposed by this Act may be recovered in England and Ireland before two justices of the peace, and in Scotland before two justices of the peace or the sheriff; and for that purpose in England and Scotland the provisions of the Act of the eleventh and twelfth years of Her present Majesty, chapter forty-three, and in Ireland, the 'Petty Sessions (Ireland) Act, 1851,' shall extend and apply to this Act, and to all proceedings in relation thereto; and it shall not in any such proceedings be necessary to allege or prove the ground or other place where an offence is committed to be the property of or occupied by any person: provided always, that the convicting justices or sheriff may, if they or he shall think fit, award to the informer or prosecutor (not being a police constable or peace officer) in any such proceedings, any portion not exceeding one moiety of any penalty recovered under the aforesaid enactments: Provided also, that every informer or prosecutor, and every person who shall give evidence against any other person proceeded against under this Act, shall be freed and discharged from any such penalty which he may have incurred for or by reason of his having participated or aided in the commission of the offence with respect to which he shall so inform or prosecute or give evidence, provided the information against such other person has been laid, or such evidence has been given, before the laying of any information (if any) against such informer, prosecutor, or witness for the recovery of any penalty he may have so incurred."

ALKALI WORKS REGULATION BILL.

The Commons' Amendments to this Bill have, after much discussion, been consented to by the House of Lords, and manufacturers must now prepare to meet the requirements of the Act, which will come into operation on the 1st of January next. The object of the

Act is to ensure the better condensation of the muriatic (hydrochloric) acid gas evolved in alkali works. According to the provisions of the Act, every alkali manufacturer shall make arrangements for the condensation of not less than ninety-five per cent. of the acid gas, or be liable to a penalty not exceeding fifty pounds for the first offence; and in respect to every offence after a previous conviction, to a penalty not exceeding one hundred pounds. For the purpose of carrying into effect the provisions of the Act, inspectors will be appointed whose duty it will be to ascertain from time to time that the alkali works are carried on in such a manner as to secure the proper condensation. By the fifth clause, as amended by the Commons, provision is made for imposing penalties upon workmen for offences against the Act, when it has been proved that the owners of works have taken every care to comply with and enforce the execution of the Act, and that the workmen are alone to blame for the offences.

All manufacturers of alkali, sulphate of soda, and sulphate of potash, ought to master without delay the provisions of this Act.

EXHIBITION MEDALS BILL.

An excellent measure, intituled "An Act to Prevent false representations as to Grants of Medals or Certificates made by the Commissioners for the Exhibitions of 1851 and 1862," passed through both Houses in the last days of the Session. The Act provides that—

"1. If any trader commits any of the offences following:—that is to say—

"Falsely represents that he has obtained a Medal or Certificate from the Exhibition Commissioners;

"Falsely represents that any other trader has obtained a Medal or Certificate from the Exhibition Commissioners;

"Falsely represents that any article sold or exposed for sale has been made by, or by any process invented by, a person who has obtained in respect of such article or process a Medal or Certificate from the Exhibition Commissioners;—

"He shall incur the following penalties: that is to say,—

"1. For the first offence he shall forfeit to Her Majesty a sum not exceeding five pounds.

"2. For any subsequent offence he shall forfeit to Her Majesty a sum not exceeding twenty pounds, or be imprisoned for a period not exceeding six months."

In proceedings under this Act it will not be necessary to prove that any person has sustained damage by the false representations of the defendant.

On the order for the third reading of the Bill in the Lower House on the 27th ult. Mr. Ayrton and Lord Robert Cecil complained of the undue rapidity with which it had been hurried through its stages, and urged many objections to its provisions.

Mr. Milner Gibson, on the other side, said he was not competent to decide as to the precise legal meaning of every word in the Bill, but he understood the principle and the object of the measure, and as it had come down from the other House he presumed that the noble and learned Lords who had considered it were satisfied with the language used in the various clauses. The object of the Bill was to prevent persons who had not obtained medals at the late Exhibition, and who perhaps had not even exhibited their goods there, falsely representing to the world that they had obtained medals and had exhibited, and thus obtaining for themselves an advantage which they would not otherwise possess, to the disadvantage of those who had obtained medals and had been at the expense of exhibiting. In point of fact, it was proposed to enact that after the passing of the Bill persons should be required, instead of telling a falsehood, to tell the truth. The Trades Mark Act had nothing to do with this matter. An Exhibition medal was not a trade mark. An attempt was made in the Court of Chancery to obtain an injunction to put a stop to this mode of fraud, but it failed, because an Exhibition medal was held not to be a trade mark. In principle, of course, there was as much dishonesty in the wrongful assumption of the one as of the other, and it was only fair that protection should be given to the holders of the medals. As to the passing of the Bill through two stages in one day, that was by no means uncommon at the end of the Session. It would, no doubt, be objectionable if such a course were constantly pursued; but there were exceptions to every rule. In conclusion, the hon. member expressed a hope that the House would not be deterred by mere technical difficulties from providing a remedy for a serious wrong which was daily being committed, and authorizing the summary procedure which he believed would most effectually accomplish that object.

Upon a division, Mr. Ayrton's amendment to defer the third reading was negatived by 62 to 15, and the Bill was accordingly read a third time and passed. The introduction of this measure into Parliament was brought about by the Committee of Prize Medal-holders appointed by the meeting held at the house of the Society of Arts on the 18th of June.

AN ACT TO REDUCE THE DUTY ON RUM IN CERTAIN CASES.

The following is a copy of the Act relating to the Methylation of Rum, passed on the 28th ult:—

"Whereas by an Act passed in the eighteenth and nineteenth years of Her Majesty's reign, chapter 38, spirit of wine is allowed to be methylated duty-free, and it is expedient to allow foreign and colonial rum to be also methylated, on payment of the reduced duty hereinafter mentioned: Be it enacted by the Queen's most Excellent Majesty, by and with the advice and consent of the lords spiritual and temporal, and commons, in this present parliament assembled, and by the authority of the same, as follows:

"1. It shall be lawful for the Commissioners of Customs to permit and authorize any licensed rectifier of spirits, or any person who shall be duly licensed under the said recited Act to make or mix methylated spirits, to mix in the Customs warehouse, and under such conditions and regulations as the said commissioners shall direct, foreign or colonial rum of not less degree of strength than twenty per cent. over proof, and in a quantity not less at one time than the contents of the whole cask in which the same shall have been imported, with not less than one-ninth of its bulk measure of wood naphtha or methylic alcohol, or with such other article or substance as in the said recited Act is mentioned, and thereupon such mixture shall be allowed, chargeable only with the reduced or differential duty hereinafter mentioned, for use for such purposes and in such manner as is allowed by the said recited Act, or any Act amending the same, with regard to methylated spirit: Provided that no such rum shall be so mixed as aforesaid until payment shall have been made to the said Commissioners of Customs of the difference between the duty of customs chargeable on the importation of such foreign and colonial rum respectively and the duty of excise chargeable on spirits distilled in the United Kingdom.

"2. All wood naphtha or methylic alcohol, or other such article or substance as aforesaid, to be mixed with such rum, shall be provided by the Commissioners of Inland Revenue for and at the expense of the person proposing to make such mixture, and the said mixture shall be denominated methylated spirit, and shall be removed, under the certificate of the proper officer of customs, to some approved store belonging to a rectifier of spirits or to a licensed maker of methylated spirit.

"3. All the powers, provisions, clauses, regulations, forfeitures, pains, and penalties contained in the said recited Act and in the Act passed in the twenty-fourth and twenty-fifth years of Her Majesty's reign, chapter 91, in relation to methylated spirit, shall be applied and put in force with respect to all spirits mixed under the provisions of this Act.

"4. It shall be lawful to export any methylated spirit mixed under the provisions of this Act or of the said first-recited Act, under such regulations as the Commissioners of Customs or Inland Revenue shall respectively make in that behalf."

GOSSIP.

Dr. W. J. Russell has been appointed Assistant to Professor Williamson in giving, at University College, the Birkbeck course of instruction in Chemistry for persons engaged in manufactures. Dr. Russell is one of the contributors to the new Dictionary of Chemistry now publishing.

The Governors of St. Thomas's Hospital, it is stated, have definitively arranged for the purchase of the proposed site at Stangate, on the bank of the Thames, adjoining Westminster-bridge, for £95,000.

Mr. J. P. Sargeant, M.R.C.S. and L.S.A., announces, in the advertisement columns of *The Times*, that he will lecture on Chlorate of Potassa, and its use in oxidizing the blood, at St. James's Hall, Piccadilly, September 16th, when he will "satisfactorily prove that chlorate of potassa (as prepared by passing chlorine through a mixture of quicklime and water, and subsequently boiling a long time with chloride of potassium) is a most active remedy for oxidizing the blood, and restoring vitality to the low, vitiated state of the nervous system, and is therefore calculated to supersede the use of iron, mercury, quinine, and sarsaparilla." The idea of publicly unfolding a new mode of medicine in one of our popular places of amusement is novel.

The authorities in the department of the Isère have announced that a premium of 40,000f. is to be given to the author of an efficacious remedy against the disease which has caused so much destruction among silkworms in late years. In order to obtain the prize, the candidate must prove that his remedy has proved efficacious during three consecutive years. Experiments are to be tried with the proposed remedy at Grenoble, or within a circumference of two leagues, on silkworms produced from thirty grammes of seed at least. Every person desirous of competing is to make known his intention to the administrator of the commune where he proposes to make the experiment.

The botanical garden in the Bois de Boulogne has just received a magnificent *Strelitzia* from Mr. Hitchcock, an English gentleman who resides at St. Bertin, in the pretty valley of St. Omer, and who devotes his time to the cultivation of rare plants. Mr. Hitchcock presented the plant through M. Quenson, President of the Tribunal of the Society of Agriculture of St. Omer, under the name of *Strelitzia Quensoni*. The *Strelitzia Quensoni* is remarkable for its height and for its beautiful blue flower. It was named *Strelitzia* by Sir Joseph Banks, after the wife of George III., who was a princess of the house of Mecklenburg Strelitz.

GAZETTE.

BANKRUPTS.

Church, Daniel, Buxton-street, Spitalfields, chemist.
Dobbins, William, Birmingham, druggist's assistant.
Gunn, Frederick John, Newnham, Gloucestershire, chemist.
Henchley, Joseph Richard, Birmingham, chemist.
Muddiman, Joseph Dagnall, Aylesbury, perfumer.
Shelley, Edward Shaw, Bilston, chemist.
Shelley, John Burton, Bilston, chemist.
Warden, Edward, late of Burham, Kent, dealer in artificial manures.

PARTNERSHIPS DISSOLVED.

Gaskell, G. T., and Co., Stainton and Kendal, Westmoreland, superphosphate manufacturers.
Hacking and Pilkington, Oswaldtwistle, Lancashire, chemists.
Sanderson, W., and Durrad, W., Camden-town, manufacturing drysalters.
Sumner, J. and W., Birmingham and Coleshill, chemists.
Walne, W., and Morgan, C., Norwich, chemists.
Weston, T. and S., Standish, Lancashire, baryta manufacturers.

NOTES AND QUERIES

Colours for Show-Bottles.—("Devonport.")—On page 56 of our last volume we note the successful application of magenta dye (acetate of rosaniline) to show-bottles. On page 176 we reproduce from the *American Druggists' Circular* several forms which are highly recommended.

(W.G.)—We cannot give you a formula for a mauve-coloured solution, but would suggest the trial of the ordinary mauve dye, or mauve ink diluted with water. The following gives a colour very near to mauve:—Smalts ℥iv., nitric acid ℥iv.; let it stand twenty-four hours, then add of water cong. ij, alum ℥j, and liquor of ammonia ℥iv.

Treatment of Cases of Poisoning.—Dr. James Edmunds recommends the following as a simple, safe, and accessible prescription for the whole range of acid and corrosive poisons, and which if promptly used will almost invariably save life:—Mix 2oz. of powdered chalk or magnesia, or 1oz. of washing soda, with a pint of milk, and swallow at one draught; then tickle the back of the throat with a feather or the finger, so as to produce vomiting. Afterwards drink freely of hot milk and water, and repeat the vomiting, so as to thoroughly wash out the stomach. Any quantity of chalk or magnesia may be taken with safety, but soda in large quantities is injurious. Dr. Edmunds further adds that, the narcotics being excepted, milk alone is an antidote for almost all the poisons, and especially if followed by vomiting.

Pomade for Darkening the Hair.—("Subscriber.")—We are not able to give you a receipt for the so-called "Walnut Pomade." A strong tincture of the shells of green walnuts scented with oil of lavender is in common use as a hair-dye on the Continent. We should imagine that there would be little difficulty in combining such a tincture with ordinary pomade. The following formula for a pomade dye may suit your purpose:—Nitrate of silver and cream of tartar, of each ʒj; liquor of ammonia ʒij; dissolve, add of lard ʒiv, and mix well together.

Pills for Toothache and Neuralgia.—(A. B. G., Rothwell.)—We are unable to furnish you with a receipt for "Stevenson's Pills;" but we have no doubt that some of our subscribers will send us the formula, on learning that it is required by a brother pharmacist. The following formula for "Odontalgic Pills" is in great favour on the Continent:—Take of powdered opium and extracts of belladonna and henbane, of each 10 gr.; oil of cloves, 20 drops; powdered pellitory, ʒss.: beat them to a mass, and divide into 1-grain pills; keep these in a corked phial. They must be used with care.

Granulated Citrate of Magnesia.—(T. D. M., Glasgow.)—This article was first introduced by Mr. Alfred Bishop, who prepared it by a secret process. It is now manufactured by other persons, whose processes are also secret. The forms which have been published are worthless. You will understand from this that it is impossible for us to comply with your request.

NOTES RELATING TO THE MANAGEMENT OF OUR JOURNAL.

Correspondence.—All communications should be addressed to the Editor, at 24, Bow Lane, E.C.; those intended for publication should be accompanied by the real names and addresses of the writers.

Subscription.—The subscription to our Journal is 5*s.* per annum, payable in advance. Should a receipt be required, a stamped envelope must be sent with the amount of subscription. A specimen number may be had upon application, price 6*d.*

Post-Office Orders.—Post-Office Orders to be made payable at the General Post Office to the Publisher, James Firth, who is alone authorized to receive accounts.

Advertisers are particularly requested to write their names and addresses very distinctly, to prevent errors and disappointment.

Correspondence

THE NEW MEDICAL BILL.

Manchester, July 30, 1863.

Sir,—Regarding it probable that your next number may contain some short notice of a meeting of Chemists in this city, called to take into consideration the provisions of the above Bill, I shall esteem it a favour if you will allow me to state that, as the mover of the first resolution, I should not have spoken so strongly against the Bill, had I not laboured under a misconception as to its operation. As the result of riper knowledge on this subject, I am free to confess that my views are greatly modified. I do not object, nor have I have ever objected, to a compulsory examination of those whose business is to compound medicine. It appears to me that the principle of the Bill is right, and that no duly-qualified Chemist has anything to fear from it.

Still, I often think that people are more afraid of the *ignorance* of Druggists than they need be. A careful perusal of the records of "accidental poisoning" will convince any one that nineteen times out of twenty such cases are the result, not of ignorance, but *inadvertence*. The dispenser gets hold of the *strychnine* for the *salicine* bottle, or the tincture of *opium* for the tincture of *rhubarb* bottle; or the assistant gets down the *oxalic acid* for the *Epsom salts* jar; or else the patient gets hold of the *liniment* in mistake for the *draught*, or a bottle of "disinfecting fluid" for one of "Dinneford's magnesia."

I remain,
Your obedient Servant,
J. T. Slugg.

THE PHARMACEUTICAL SOCIETY.

August 10, 1863.

Sir,—The course pursued by the United Society against medical interference has surprised the Council of the Pharmaceutical Society, and it now sees the necessity for admitting that there are other Chemists and Druggists besides those called Pharmaceutists; and that, "above all things, however, it is to be desired that the objects and interests of those who are engaged in the *practice of Pharmacy* should, as far as possible, be carried out by united action and harmonious co-operation among the members of the trade generally." "Preposterous" as is thought the proposition, there certainly was an attempt to deprive all Chemists not members of the Pharmaceutical Society keeping shops and compounding medicines, without any reference to existing rights; and unless it had been exclusively for the benefit of the whole "Pharmaceutical body," I doubt whether the principle would have been "hailed as correct." The United Society has at last obtained that which from its formation it has courted, the co-operation of the Pharmaceutical Society in defence of trade interests; and nothing can be more gratifying than the view taken of the two Societies by one of its own members, and which appears in a letter in the *Pharmaceutical Journal* for this month. If, Sir, you could find space in the CHEMIST AND DRUGGIST to reprint the "Error and Remedy" of Mr. Barling, of Weymouth, it would be appreciated by all who read it. Here is one of the oldest members of the Pharmaceutical body, with true courage, pointing out its failings, and re-echoing the principles which have been advocated by the United Society. I sincerely trust the Council will receive in kindly spirit that good advice from its own, which it has hitherto rejected from others.

I am, &c.,
A CHEMIST.

[The letter referred to by our Correspondent is printed below. It sets forth the advantages of a General Act of Incorporation like that proposed by the United Society, and doubtless expresses the opinions of many Pharmaceutical Chemists. Great praise is due to our contemporary for publishing the letter.—ED. C. & D.]

THE ERROR AND THE REMEDY.

To the Editor of the Pharmaceutical Journal.

SIR,—As an old member of the Pharmaceutical Society, I ask permission to occupy some of your space; and I write on a subject which claims attention not only from Pharmaceutical Chemists, but from the trade in general. That to which I wish to draw the attention of your readers is (1) the lamentable failure of our Society to accompish the objects for which it was founded, and (2) to offer some hints for improvement.

We see from the July number of our Journal, after an existence of nearly twenty years, how very small a proportion Pharmaceutical Chemists bear to Druggists in general. We see that outsiders are quite shut out; and we have the experience that our legislators will not allow of any exclusive legislation by which an examination will be made compulsory, which is far beyond the present attainments of the bulk of those interested, and the majority of whom are well able to conduct their several businesses. Let us seek to find out wherein we err, and what is the remedy; and as in the multitude of counsel there is wisdom, I venture to make the following hints:—It appears to me we have aimed a great deal too high all at once, and have quite overshot our mark. What is really required is, that none should be allowed to practise Pharmacy who have not a good practical knowledge of the drugs they deal in, and of the language in which prescriptions are written. But what we try to obtain is, a theoretical knowledge of many other things besides, and that from a body of youths and men who have positively nothing but honour to gain from their toil and outlay; for, so far as my experience goes, non-members are equally successful in business, and non-associates or assistants, as their conforming brethren. Indeed, I am not by any means sure that I should consider association with our Society any recommendation to an assistant. I would much rather take one from a good house of business than from the Pharmaceutical Laboratory, and I know such a feeling is very general in the trade, especially where anything like an extensive country business is done. And then the advantages which we as members gain in exemption from service on juries is really one in which all Druggists will be found practically to share, as no judge will henceforth find one who pleads the exigencies of the Drug trade as a plea for non-attendance.

I consider our Society much too hard to enter; and when in, that it gives too small an advantage to its members. It is true we have the Journal for our guinea per annum: but that is all; for, so far as I can see, those in Weymouth who are non-members are not one whit behind members in public estimation; and our very right to the title depends on the continuance of our guinea subscription.

I think the great and fundamental error we have committed is in trying to obtain a full-fledged, vigorous Society all at once, instead of letting it grow naturally; and we have only got as our result an abortion, a hothouse plant, which has no principle of self-sustainment, and which cannot bear the roughs and realities of life. I don't object to the looking forward, by-and-by, to even more stringent requirements than we have at present; but the thing must grow—not be manufactured. At present we must try back, and what I would suggest is as follows:—

1st. That a new Act be obtained, making membership compulsory, and recognizing two grades:—(1) Members of the Pharmaceutical Society; (2) Masters in Pharmacy.

2nd. That all Druggists at present in business, and their assistants who have actually served an apprenticeship, be invited to have their names enrolled—gratuitously—as Members, merely charging the certificate; and that all existing Pharmaceutists, or perhaps only those by examination, be enrolled as Masters.

3rd. That only a small subscription, say 10s., be required annually from each Member, and that the gratuitous supply of the Journal be discontinued.

4th. That admission to the Society should in future recognize especially apprenticeship, a knowledge of English, Latin, and of the properties and doses of drugs. The examination might be gradually made more stringent; and an altogether higher examination provided for Mastership.

I think these would be sufficient, and be such as we might attain, as all existing Druggists and their assistants would hail such a step; and then the Society having once a good root and a real useful existence, its growth would be natural, not artificial or forced; while the Journal itself would greatly improve under healthy competition. For myself I can safely say, I get far more practical hints from the CHEMIST than I do from our own Journal. I could mention several things from the former by which I save pounds per annum; but I cannot think of a single hint in the *Pharmaceutical* which has been of the least use to me in my business.

I throw out these hints for the purpose of ventilating the subject, and would suggest that Druggists and their assistants all over the kingdom be invited to meet and discuss the matter, we in the mean time furnishing them with all the information we can on the subject; and that afterwards a series of meetings be held in London, composed of delegates from the local meetings, where the matter might be fully dissussed and such steps taken as would bring our views prominently before the legislature.

I am, Sir, yours obediently,
Weymouth, July 6, 1863. THOMAS BARLING.

CHEMISTS *v.* DOCTORS.

21, High Ousegate, York,
August 6, 1863.

SIR,—I troubled you last month with a few remarks upon "Trade Grievances," and I then promised that on a future occasion I would expose the absurdity and injustice of the attempts made by the Medical body to prevent Chemists from prescribing in simple cases.

1st. As to competency. There are few Chemists who are not capable of prescribing in the class of cases which apply to them for assistance. There are hundreds of Chemists in business who have been dispensers for Surgeons, and who have not only been allowed to prescribe for, but to visit their employers' patients: surely, then, they are competent to prescribe for any case that is likely to apply to them. My own opinion is, that, as a rule, there is far more incompetency amongst the Medical Profession in this respect than with those whom they wish to degrade by depriving them of their rights. There are few Chemists who do not know something of the doses and the composition of most medicines; whereas I have seen many a young man pass his examination (during the seven years I was hospital dispenser), and receive a medical diploma, who could neither prescribe nor dispense. Indeed, I think I may fairly take credit for having saved the lives of some of Her Majesty's subjects by altering the dangerous doses prescribed by students who were soon to be let loose upon society with a licence to kill.

2ndly. The public are in no danger of injury, either to their persons or pockets, by applying to a Chemist when suffering from trifling ailments. Every Chemist is fully aware of the risk he runs in taking under hand a dangerous case. A medical man can settle all mistakes or neglects (if any should have occurred) by signing a little printed form. Not so the Chemist: he knows full well that if a case prescribed for by him were to terminate fatally, there would be a medical investigation, in which he would be sure not to be judged very leniently. Then as to the pockets of the public: where are the poor to go for two or three pennyworth of cough mixture, a dose for bowel complaint, or for a little liniment to rub a strain or the like? They may not have 1*s*. 6*d*. or 2*s*. to spend, and thus it suits their purpose a great deal better to spend three or four pence with a Druggist. It is therefore evidently not to the advantge of the public to restrain the Chemist and Druggist from prescribing, in order to gratify the monopolizing dog-in-the-manger sort of spirit of some of the members of the Medical body. But monstrous indeed is the proposed Bill of the Medical Council, to compel Chemists to undergo an examination before a Medical Board, or to disqualify them from dispensing. Now, I am persuaded that the majority even of medical men would admit that for carefulness and neatness in this department, we, as a body, stand unrivalled. Those who have most to do with physicians' prescriptions, know best how little many of the faculty understand the practical parts of Pharmacy. Then as to general practitioners, they are generally known to be very careless and slovenly in dispensing: indeed, the making up of their medicines is frequently entrusted to a groom, errand-boy, or any other convenient person. The following advertisement, taken from the *Stamford Mercury*, July 31, shows this:—"Wanted, a comfortable situation with a surgeon, to dispense medicine. No objection to look after a horse and trap. Wages, £20. Good references if required."

I think the Medical Council will do far better to look at home, and to see that the men who are allowed without any check to have the health and lives of the community in their hands are fully qualified for the important duties devolving upon them, and they may safely leave the Chemists and Druggists to manage their own affairs. As I said in my last letter, so say I now, it becomes every member of the trade to rally round the United Society. Union is strength. Let the Chemists and Druggists try the experiment, and they will find it is so.

I am, Sir,
Yours respectfully,
WM. CHARLES HAYLAND.

TRADE SWINDLING.

Liverpool, August 10th, 1863.

SIR,—I write to expose a trick that has been carried on for about a fortnight in this town. A man calling himself Captain Steward, of the ship *Flora*, and who says he is staying at the Adelphi Hotel, calls upon the Druggists one after the other. The tale told to each is nearly the same. He is going to America very shortly, and wants six dozen French letters procured for him, and he will call the following day for them. Soon after a man enters, and shows one of Lang and Co.'s cards, and inquires if any I.R. syringes or teats are wanted. Lastly, he shows French letters, and frequently effects a sale. He makes out the invoice in the name of Gorfinkle. It is needless to say that the Captain never calls again. It is with the hope of preventing the gentleman acting in the same manner in other large towns that I write this. I enclose my name and address, not for publication, but as a guarantee that what I say is true.

I remain, Sir,
Yours, &c. J. W. N.

[We scarcely deem the publication of this letter necessary. The peculiar nature of the Captain's order will, in nine cases out of ten, put Chemists on their guard, and lead them to wear their kicking boots for a few days.—ED. C. & D.

TRADE REPORT.

In Chemicals there has been more business done during the month than for some time past: prices, however, are not materially altered. Transactions to some extent have been made in Tartaric Acid at 1*s.* 5½*d.*, and also in Citric Acid at the same price, the market closing firm. Sales of Chlorate of Potass have been more freely made at 11*d.* to 11¼*d.* Both Bichromate and Prussiate of Potass continue dull, without change in quotations. A large business has been done in Iodine, and the price has advanced 1*d.*; the last sales made in seconds were at 4½*d.* Small sales have been made in Sal Acetos at 11*d.* to 11½*d.* Soda Ash is done at 2*d.* on the spot. Soda Crystals are scarce at 95*s.* ex ship. A good business has been done in Sulphate of Copper at 31*s.* 6*d.* to 32*s.* Sulphate of Ammonia is steadier at 13*s.* to 14*s.* Cream Tartar declined to 105*s.*, but is now better at 107*s.* 6*d.* to 110*s.* Alum is better, and scarce: trcs. is now £6 15*s.*, and brls. £7. Bleaching Powder is quiet at 9*s.* 6*d.* to 10*s.* Bi-Carbonate is dull at 12*s.* 6*d.* Flour of Sulphur is dull—11*s.*, and Roll 9*s.* 9*d.* to 10*s.* Small sales of Salammoniac at 35*s.* to 37*s.* according to quality. Linseed Oil is dull, and the price is rather lower; for forward delivery on the spot 44*s.* 6*d.* to 44*s.* 9*d.*, Hull 43*s.* 6*d.*, and last four months 41*s.* 9*d.* Rape is dull and much lower, our quotations being now rarely supported. Turpentine continues to decline, and market very quiet. French was last done at 64*s.* to 65*s.*, and for the month 62*s.* to 63*s.* No American here. Petroleum is dull, and gradually going down. A cargo of 5,000 lbs. has just arrived. Refined is now 2*s.* 3*d.* to 2*s.* 3½*d.*, and Crude £19 to £19 10*s.* Ashes are quiet at 32*s.* for both Pot and Pearl. Resin is rather cheaper.

Resales of Drugs have been small, except Castor Oil, which has been brought forward in large parcels, and sold at fully ¼*d.* per lb. decline; middling and good pale seconds brought 4¾*d.* to 5¼*d.*, and yellow and straw 4¼*d.* to 4¾*d.* A few sales of Carmine have been made at 7*s.* 11*d.*, and Anniseed Oil 5*s.* 8*d.* to 5*s.* 9*d.* Citronelle is easier, sales being made at 4¾*d.* to 5¼*d.* Balsam Capivi is rather cheaper; last sales at 1*s.* 3½*d.* to 1*s.* 5*d.* Cubebs are held for 105*s.* to 110*s.* Sarsaparilla is steady; Jamaica sold at 1*s.* 7*d.* to 2*s.*, Honduras 11*d.* to 1*s.* 1*d.* China Rhubarb has been nearly all bought in; good 3*s.* 3*d.* to 4*s.* No change in Senna, and only a few small parcels sold. Roll Annato is rather cheaper. Some parcels of Quill Bark have been sold at firm prices. More inquiry for Sulphate Quinine; English 6*s.* 6*d.*, and French 6*s.* 1*d.* to 6*s.* 2*d.* Shellac is rather dearer. Turkey Opium is 1*s.* dearer; sales of good at 18*s.* to 18*s.* 6*d.* Gum Arabic is rather dearer for good qualities. China Vermilion is 1*d.* to 2*d.* lower; last prices 2*s.* 1*d.* to 2*s.* 2*d.* Turmeric has advanced to 27*s.* to 27*s.* 6*d.* for good Bengal, but is now quiet. Jamaica Beeswax has sold more readily.

PRICE CURRENT.

☞ *These quotations are the latest for* ACTUAL SALES *in Mincing Lane. It will be necessary for our retail subscribers to bear in mind that they cannot, as a rule, purchase at the prices quoted, inasmuch as these are the* CASH PRICES IN BULK. *They will, however, be able to form a tolerably correct idea of what they ought to pay.*

	1863.				1862.			
	s.	d.	s.	d.	s.	d.	s.	d.
ARGOL, Cape, pr ct.	85	0	..98	0	90	0	100	0
French	40	0	..60	0	30	0..	60	0
Oporto, red	45	0	..47	0	45	0..	48	0
Sicily.............	70	0	..75	0	65	0..	80	0
Naples, white.....	65	0	..80	0	65	0..	80	0
Florence, white...	90	0	95	0	90	0	100	0
red....	80	0	..85	0	85	0..	87	6
Bologna, white....	110	0	115	0	115	0	120	0
ARROWROOT, duty 4½ per cwt.								
Bermuda ...per ℔.	1	10 ..	2	2	0	11..	1	3
St. Vincent........	0	6½..	0	8½	0	3..	0	6
Jamaica.	0	5½..	0	6½	0	2½	0	3¼
Other West India.	0	5½..	0	6½	0	2¼	0	3
Brazil............	0	3½..	0	4¼	0	1½	0	2
East India........	0	3½..	0	4½	0	1½	0	2½
Natal	0	6 ..	0	10	0	2½	0	7½
Sierra Leone......	0	5¼..	0	5¾	0	2½	0	3
ASHES....per cwt.								
Pot, Canada, 1st sort	32	0 ..	0	0	35	6..	0	0
Pearl, do. 1st sort.	32	0 ..	0	0	36	0..	36	6

	1863.				1862.			
BRIMSTONE,	s.	d.	s.	d.	s.	d.	s.	d.
rough......per ton	125	0 ..	0	0	135	0..	0	0
roll...............	175	0	190	0	200	0	0	0
flour..............	220	0	240	0	280	0	0	0
CHEMICALS,								
Acid—Acetic, pr lb	0	3½..	0	0	0	4..	0	4½
Citric	1	5½..	0	0	1	8..	0	0
Nitric	0	5 ..	0	5½	0	4½	0	5
Oxalic........	0	8 ..	0	8¼	0	8½	0	9
Sulphuric	0	0⅝..	0	0	0	0¾	0	0
Tartaric crystl	1	5½..	0	0	1	7¾	1	8
powdered.	1	6 ..	0	0	1	8½	1	9
Alum .....per ton.	135	0	140	0	130	0	135	0
powder	155	0 ..	0	0	145	0..	0	0
Ammonia. Crb. lb.	0	5 ..	0	0	0	5½	0	6
Sulphate per ton	280	0	300	0	270	0	290	0
Antimony, ore....	200	0	230	0	200	0	240	0
crude, per cwt	22	0	..23	0	24	0..	28	0
regulus	40	0 ..	0	0	43	0..	44	0
French star...	39	0 ..	0	0	44	0..	0	0
Arsenic, lump....	16	0	..17	0	17	0..	18	6

PRICE CURRENT—*continued.*

	1863.				1862.			
CHEMICALS.	s.	d.	s.	d.	s.	d.	s.	d.
Arsenic powder ..	6	6	.. 7	0	7	6	.. 8	0
Bleaching Powder.	9	6	..10	0	9	0	..10	0
Borax, E. I. refind	0	0	.. 0	0	52	6	.. 0	0
British........	56	0	.. 0	0	64	6	..65	0
Calomel....per lb.	2	9	.. 0	0	2	9	.. 0	0
Camphor, refined.	1	7	.. 1	10	3	2	.. 4	4
Copras. grn. pr. tn.	57	6	..60	0	65	0	.. 0	0
Crrsiv. Sublmte. lb	1	11	.. 0	0	1	11	.. 2	0
Green Emrld. pr. lb	0	0	.. 0	0	0	9	.. 0	11
Brunswk. cwt.	0	0	.. 0	0	14	0	..42	0
Iodine, dry, pr. oz.	0.	4½	.. 0	4¾	0	5½	0	6
Magnesia Crbn. ct.	42	6	..45	0	42	6	..45	0
Calcined, lb...	1	6	.. 1	8	1	6	.. 0	0
Minium red, pr. ct.	21	3	..21	6	21	6	..23	0
orange........	32	0	..33	0	33	0	..34	0
Ptsh. Bichrom. lb.	0	8¾	.. 0	9	0	7¾	0	8½
Chlorate	0	11¼	.. 0	0	1	1	0	0
Hydriodate oz.	0	4½	.. 0	5	0	5½	0	6
Prussiate ..lb.	0	11½	.. 1	0	1	0	1	0½
red ..	1	11	.. 0	0	2	2	.. 0	0
Precipit. red pr. lb	2	9	.. 0	0	2	9	.. 2	10
white...	2	9	.. 2	10	2	10	.. 0	0
Prussian Blue.....	1	0	.. 1	10	1	6	.. 1	10
Rose Pink....pr ct.	29	0	.. 0	0	29	0	..30	0
Sal-Acetos...pr lb.	0	10¼	.. 0	10½	0	10½	0	11
Ammoniac, ct.								
British ..	35	0	..37	0	36	0	..38	0
Epsom........	8	0	.. 8	6	8	3	.. 8	6
Glauber	4	6	.. 5	6	5	6	.. 0	0
Soda, Ash, pr deg..	0	2	.. 0	0	0	2⅛	0	0
Bicarbonate..ct.	12	0	..13	0	12	0	..13	0
Crystals per ton.	95	0	.. 0	0	85	0	..90	0
Sgr. Lead, whte, ct.	37	0	.. 0	0	37	0	..40	0
brown........	25	0	.. 0	0	28	0	.. 0	0
Slphte. Quinine oz								
Britsh in bttl.	6	6	.. 0	0	7	6	.. 7	9
Foreign	6	3	.. 0	0	7	3	.. 7	6
Sulpht. Zinc..cwt.	14	6	..15	0	14	6	..15	0
Verdigris........lb.	0	10½	.. 1	0	1	3	.. 1	5
Vermilion, English	2	8	.. 3	0	2	8	.. 3	1
China ..	2	0	.. 2	1	2	3	.. 2	4
Vtrl. blue or Romn.								
per cwt.	30	0	..31	0	33	0	..35	0
COCHINEAL, pr. lb.								
Honduras, black..	2	9	.. 4	3	2	6	.. 4	2
silver...	1	8	.. 3	6	1	3	.. 3	4
Mexican, black....	2	10	.. 3	2	2	7	.. 2	9
silver ..	2	8	.. 2	10	2	6	.. 2	11
Lima	2	8	.. 3	1	2	7	.. 3	1
Teneriffe, black ..	2	11	.. 3	4	2	8	.. 2	9
silver ..	2	9	.. 2	11	2	6	.. 2	8
DRUGS,								
Aloes, Hepatic, ct.	100	0	180	0	135	0	200	0
Socotrine	120	0	280	0	160	0	480	0
Cape, good....	42	0	..45	0	38	0	..43	0
inferior.	26	0	..40	0	20	0	..36	0
Barbadoes....	50	0	360	0	60	0	420	0
Ambergris, gray.								
per oz..	15	0	..20	0	44	0	..52	0
Angelica Root, ct..	20	0	..35	0	20	0	..35	0
Aniseed, China str.	110	0	115	0	70	0	..85	0
German, &c.	19	0	..38	0	20	0	..40	0
Balsam Canada, lb	1	0	.. 1	1	1	5	.. 0	0
Capivi......	1	3½	.. 1	5	1	7	.. 1	8
Peru........	4	9	.. 4	10	5	0	.. 5	2
Tolu	4	0	.. 4	3	4	0	.. 4	3
Bark Cascarilla ct.	20	0	..40	0	23	0	..40	0
Peru crown & grey								
per lb..........	0	10	.. 2	2	1	0	.. 2	4
Calisaya, flat...	3	6	.. 3	8	4	3	.. 4	6
quill....	3	0	.. 3	4	3	9	.. 4	2
Carthagena....	1	2	.. 1	8	1	3	.. 2	6
Pitayo........	1	7	.. 2	6	1	10	.. 2	9
Red	2	6	.. 8	0	2	6	.. 6	6
Bay Berries, pr ct..	22	0	..40	0	22	0	..40	0
Bucca Leaves, lb.	0	2½	.. 1	6	0	2½	1	6
Camomile Flowers	25	0	..65	0	30	0	..55	0
Camphor, China ..	117	6	130	0	340	0	350	0
Canella Alba......	19	0	..38	0	19	0	.40	0
Cantharides, pr lb.	2	2	.. 2	3	3	3	.. 3	4
Cardamoms. Mlbar.								
good............	5	9	.. 6	4	6	0	.. 6	6

	1863.				1862.			
DRUGS.	s	d.	s.	d.	s.	d.	s.	d.
Cardamoms, inferior	5	0	.. 5	4	5	6	.. 5	9
Madras..	3	5	.. 5	0	3	6	.. 5	0
Ceylon ..	4	3	.. 4	7	4	3	.. 4	6
Cassia Fistula pr ct.	20	0	..45	0	12	0	..25	0
Castor Oil, 1st pale, lb	0	5¼	.. 0	6	0	7¼	0	7¾
second	0	4¼	.. 0	5	0	6¾	0	7¼
infr. & dark	0	4¼	.. 0	4½	0	6¼	0	6¾
Bombay. in csks.	0	4	.. 0	4¾	0	5½	0	6
Castorum	1	0	..20	0	1	0	..26	0
China Root, pr ct.	12	0	..15	0	12	0	..15	0
Coculus Indicus ..	11	0	..13	0	11	0	..15	0
Cod-liver Oil, gal...	5	0	.. 7	0	4	2	. 6	0
Clcynth. apple, lb..	0	7	.. 1	0	0	7	.. 1	0
Colombo Rt. pr ct..	50	0	..75	0	20	0	..52	0
Cream Tartar, pr ct.								
French	112	6	.. 0	0	125	0	.. 0	0
Venetian	115	0	0	0	127	6	.. 0	0
grey	100	0	105	0	112	6	115	0
brown........	97	6	102	6	105	0	110	0
Croton Seed	50	0	..55	0	45	0	65	0
Cubebs	105	0	110	0	130	0	.. 0	0
Cummin Seed	26	0	..35	0	39	0	..41	0
Dragon's bld. reed.	200	0	300	0	200	0	300	0
lump...	95	0	260	0	130	0	200	0
Galangal Root....	18	0	..20	0	20	0	..23	0
Gentian Root	18	0	..19	0	20	0	..22	0
Guinea Grains, ...								
per cwt.	60	0	..70	0	48	0	..50	0
Honey, Narbonne.	50	0	..80	0	60	0	..85	0
Cuba	24	0	..36	0	24	0	..36	0
Jamaica	20	0	..65	0	28	0	..65	0
Ipecacuanha, pr. lb.	6	4	. 6	6	8	3	.. 8	6
Isinglass, Brazil...	0	10	.. 3	8	0	10	.. 3	7
East India......	0	9	.. 3	0	0	6	.. 3	6
West India	3	0	.. 3	0	3	0	.. 3	7
Russian........	9	6	..13	0	9	6	..13	0
Jalap	0	9	.. 4	4	1	6	.. 4	10
Jniper Berries cwt.								
German & Frnch	8	0	.. 9	0	9	0	..11	0
Italian	8	0	..10	0	10	0	..12	0
Lmon Juice, pr deg.	0	0½	.. 0	0	0	0¾	0	0⅞
Liquorice, per cwt.								
Spanish	80	0	..83	0	83	0	..90	0
Italian	80	0	..85	0	85	0	..95	0
Manna, flaky	3	0	.. 3	6	2	0	.. 2	6
small	1	6	.. 0	0	1	6	.. 1	9
Musk......per oz.	19	0	. 27	0	20	0	..28	0
Nux Vomica......	10	6	..12	6	8	0	.. 9	0
Opium, Turkey ..	17	6	..19	0	19	0	..21	0
Egyptian..	8	0	..11	6	7	6	..12	6
Orris Root, pr cwt.	26	0	..30	0	27	0	..30	0
Pink Root, per lb...	2	9	.. 3	0	1	9	.. 2	2
Quassia (bit. wd) ton	180	0	.. 0	0	90	0	115	0
Rhatania Root, lb.	0	8	.. 2	1	0	9	.. 1	6
Rhbrb. China, rnd.	1	6	.. 4	0	1	0	.. 4	0
flat	1	8	.. 4	3	1	2	.. 4	3
Dutch, trmd.	5	6	.. 6	0	3	6	.. 4	9
Russian	12	6	..13	0	10	0	.. 0	0
Saffron, Spanish ..	36	0	..40	0	46	0	..47	0
Salep ....per cwt.	130	0	140	0	140	0	160	0
Sarsaparilla, Lima	0	10	.. 1	4	0	9	.. 1	3
Para	0	9	.. 1	1	0	10	.. 1	2
Honduras.	0	8	.. 1	3	0	10	.. 1	4
Jamaica ..	1	2	.. 2	2	1	5	.. 2	8
Sassafras.. per cwt.	0	0	.. 0	0	11	0	..12	0
Scammony. per lb.								
virgin	27	0	..36	0	28	0	..36	0
second ..	12	0	..23	0	14	0	..24	0
Seneka Root......	3	3	.. 3	6	4	6	.. 4	9
Senna, Calcutta ..	0	0	.. 0	0	0	2	.. 0	2½
Bombay	0	2	.. 0	3½	0	2	0	3¾
Tinnevelly..	0	3	.. 1	4	0	2½	1	6
Alexandria	0	3½	.. 0	8	0	3	.. 0	6
Snake Root	2	9	.. 3	0	2	6	.. 2	9
Spermaceti, refined	1	0	.. 1	1	1	1	.. 1	2
Squills	0	1½	.. 0	2½	0	1	.. 0	2
Tamarinds, E. Ind.	12	0	..13	6	12	6	..14	0
W.I. per cwt.	17	0	..27	0	15	0	..38	0
Terra Japonica—								
Gambier, cwt ..	19	6	..24	0	21	0	..22	0
Cutch, cwt	24	0	..25	0	27	0	..28	0
Valerian Root, Eng	20	0	..40	0	20	0	..40	0

PRICE CURRENT—*continued.*

	1863.				1862.			
DRUGS	s.	d.	s.	d.	s.	d.	s.	d.
Vanilla, Mexican lb	23	0	..30	0	25	0	..55	0
Wormseed, pr cwt.	2	0	.. 0	0	2	0	.. 0	0
GUM.... . per cwt.								
Ammoniac, drop..	100	0	120	0	90	0	120	0
lump ..	15	0	..65	0	15	0	..70	0
Animi. fine pale ..	220	0	250	0	290	0	320	0
bold amber.	190	0	210	0	220	0	270	0
medium....	160	0	280	0	160	0	180	0
small & dark	100	0	155	0	120	0	160	0
ordinry dark	50	0	..95	0	40	0	..90	0
Arab. E.I.f. palepkd	56	0	..63	0	50	0	..58	0
unsortd, good to f	38	0	..54	0	32	0	..42	0
red and mixed	20	0	..30	0	28	0	..30	0
siftings	15	0	..30	0	18	0	..23	0
Turkey, pkd. gd to f.	115	0	180	0	110	0	175	0
second & infr.	50	0	110	0	48	0	105	0
in sorts	32	0	..50	0	30	0	..42	0
Gedda............	25	0	..28	0	26	0	..28	0
Barbary, white ..	52	0	..54	0	31	0	..40	0
brown ..	36	0	..38	0	27	0	..35	0
Australian...... .	26	0	..28	0	24	0	..25	0
Assafœt. fr. to gd.	30	0	112	6	40	0	110	0
Benjamin, 1st. qual.	350	0	630	0	400	0	560	0
2nd qual	280	0	300	0	260	0	330	0
3rd ,,	50	0	240	0	60	0	180	0
Copal, Angola red.	90	0	95	0	100	0	110	0
pale.	85	0	100	0	95	0	100	0
Benguela....	75	0	90	0	105	0	130	0
Sierra Lne lb	0	4	.. 1	6	0	9	.. 1	10
Manilla pr ct	22	0	..44	6	20	0	..40	0
Dammar ple. pr ct	36	0	..46	0	44	0	..48	0
Galbanum........	100	0	120	0	100	0	120	0
Gmbge. pkd. pipe	160	0	190	0	140	0	180	0
in sorts.....	90	0	150	0	80	0	110	0
Guaiacum ..pr. lb.	0	6	.. 1	5	0	6	.. 1	6
Kino ....per cwt.	220	0	280	0	260	0	280	0
Kowrie...........	34	0	..40	0	23	0	..25	0
Mstic. pkd. pr lb..	5	0	.. 6	0	5	0	.. 5	6
Myrrh gd & fi pr ct	150	0	170	0	160	0	180	0
sorts........	70	0	130	0	70	0	130	0
Olibanum, pl. drop	70	0	..80	0	54	0	..67	0
ambr & yel.	48	0	..65	0	44	0	..50	0
mixd. & dk.	16	0	..35	0	12	0	..35	0
Senegal	48	0	..50	0	38	0	..40	0
Sandrac..........	82	0	107	6	75	0	100	0
Tragacanth, leaf..	180	0	300	0	180	0	320	0
in sorts.	100	0	130	0	100	0	130	0
OILS......per tun.	£	*s.*	£	*s.*	£	*s.*	£	*s.*
Seal	42	0	..46	10	36	0	..46	0
Sperm, body......	80	0	..82	0	85	0	.. 0	0
Cod..............	53	10	..54	0	42	0	..43	0
Whale, Greenland.	0	0	.. 0	0	0	0	.. 0	0
Sth Sea pale	43	10	..44	0	36	0	..40	10
E. I. Fish...	38	10	.. 0	0	32	10	..33	0
Olive, Galipoli, ton.	59	0	..60	0	56	10	..57	10
Florence, ½-chst.	1	0	.. 1	1	22	0	.. 0	0
Cocoant. Cochn. tn	47	6	..48	0	56	0	..56	6
Ceylon ,...	46	0	..46	6	53	6	..54	0
Sydney	40	0	..46	6	46	0	..53	6
Ground Nut & Gin.								
Bombay........	42	0	.. 0	0	49	10	..50	0
Madras	44	0	.. 0	0	51	0	..52	0
Palm, fine........	36	6	..37	0	43	10	.. 0	0
Linseed..........	44	9	.. 0	0	41	0	..41	3
Rapesd. Engl. pale	45	0	.. 0	0	50	0	.. 0	0
brown.......	43	0	.. 0	0	48	0	.. 0	0
Foreign do ..	45	6	.. 0	0	50	0	.. 0	0
brown......	43	0	.. 0	0	48	0	.. 0	0
Lard	44	0	..46	0	49	0	.. 0	0
Tallow	39	0	..40	0	40	0	..41	0
Rock Crude	19	0	..19	10	0	0	.. 0	0
OILS, Essential—	*s.*	*d.*	*s.*	*d.*	*s.*	*d.*	*s.*	*d.*
Almond essen. lb.	19	0	.. 0	0	19	0	.. 0	0
expressed..	0	0	.. 0	0	1	0	.. 0	0
Aniseed..........	5	8	.. 0	0	5	9	.. 5	10
Bay.......pr cwt.	110	0	120	0	110	0	120	0
Bergamott, pr lb.	7	0	.10	6	5	6	..12	0
Cajeputa, bond, oz.	0	2½	.. 0	2¾	0	1½	0	3
Caraway....pr lb.	4	3	.. 5	6	4	3	.. 6	0
Cassia	7	9	.. 7	10	9	0	.. 9	3
Cinamon(in b), oz	1	6	.. 3	6	1	4	.. 4	0
Cinnamon Leaf...	0	2	.. 0	4½	0	2	.. 0	4
Citronel..........	0	4¾	.. 0	5¼	0	5¼	.. 0	6

	1863.				1862.			
OILS.	s.	d.	s.	d.	s.	d.	s.	d.
Clove	0	2	.. 0	4	0	4	0	0
Croton	0	0	.. 0	0	0	3	0	4
Juniper ....per lb.	1	10	.. 3	0	1	10	.. 3	0
Lavender	2	6	.. 4	6	2	6	.. 5	0
Lemon	4	0	.. 9	0	4	0	.. 8	6
Lemongrass, pr oz	0	7½	.. 0	9	0	4	.. 0	6¼
Mace, ex	0	1½	.. 0	2	0	1½	0	2
Neroli............	5	0	.. 7	0	6	0	.. 9	0
Nutmeg	0	1	.. 0	2	0	1½	0	2
Orange ....per lb.	5	0	.. 6	6	5	0	.. 7	0
Otto Roses, per oz	14	0	..22	0	15	0	..24	0
Peppermint, pr lb.								
American	8	6	..15	6	7	0	..13	3
English	33	0	..36	0	32	0	..34	0
Rhodium ..per oz.	3	6	.. 5	6	3	9	.. 6	0
Rosemary..per lb.	1	8	.. 3	0	1	10	.. 3	0
Sassafras	3	0	.. 4	0	3	0	.. 4	0
Spearmint........	5	0	.. 8	6	5	0	..10	0
Spike	1	3	.. 1	6	1	3	.. 1	6
Thyme	1	9	.. 2	3	1	9	. 2	3
PITCH, Brtsh, pr cwt.	12	0	.. 0	0	8	0	.. 0	0
Swedish	0	0	.. 0	0	10	6	..11	0
SALTPETRE, pr cwt.								
Engl, 6 p c. or under	38	0	..39	0	39	0	..39	6
over 6 per cent.	36	6	..37	6	37	0	..38	6
Madras	35	0	..37	0	36	0	..38	6
Bombay..........	34	0	..36	6	35	0	..36	6
British-refined....	40	6	..41	6	42	0	..43	0
Nitrate of Soda ..	15	6	..16	0	13	0	..14	0
SEED, Canary, pr qr.	38	0	..50	0	34	0	..50	0
Caraway, Eng, p. c.	0	0	.. 0	0	0	0	.. 0	0
German, &c	0	0	.. 0	0	20	0	..25	0
Coriander	0	0	.. 0	0	0	0	.. 0	0
East India......	0	0	.. 0	0	0	0	. 0	0
Hemp............	0	0	.. 0	0	46	0	..50	0
Linseed, Black Sea	65	0	..66	0	62	0	..63	0
Calcutta........	66	0	..68	0	64	0	..65	0
Bombay........	70	0	..72	6	69	0	. 0	0
Egyptian	62	0	..64	0	59	0	..60	0
Mustard, brn, p. bhl	0	0	.. 0	0	0	0	.. 0	0
white..	0	0	.. 0	0	0	0	.. 0	0
Poppy, E.I. per qr.	57	0	.. 0	0	59	0	..60	0
Rape, English	0	0	.. 0	0	0	0	.. 0	0
Danube	64	0	.. 0	0	70	0	.. 0	0
Calcutta, fine ..	58	0	..59	0	66	0	.. 0	0
Bombay........	60	0	..66	0	70	0	..74	0
Teel, Sesme or Gngy	60	0	..68	0	66	0	..73	0
Cotton ....per ton	155	0	160	0	165	0	170	0
Gnd. Nut Krnels, tn	340	0	.. 0	0	350	0	360	0
SOAP, Lnd. yel. pr ct.	22	0	..36	0	21	0	..36	0
mottled	36	0	..38	0	34	0	..36	0
curd........	50	0	.. 0	0	50	0	.. 0	0
Castile	40	0	..41	0	39	0	..40	0
Marseilles	40	0	..42	0	40	0	..41	6
SOY, China, per gal.	2	1	.. 2	3	2	6	.. 2	8
Japan	0	10	.. 1	0	0	8	.. 0	10
SPONGE, Turk. f. pkd	20	0	..24	0	20	0	..24	0
fair to good	8	0	..18	0	8	0	..18	0
ordinary..	3	0	.. 6	0	3	0	.. 6	0
Bahama ..	0	3	.. 1	3	0	4	.. 1	3
TURPENTINE,								
Rough..per cwt.	0	0	.. 0	0	0	0	.. 0	0
Spirits, French ..	65	0	..66	0	0	0	.. 0	0
American, in csks	100	0	0	0	115	0	.. 0	0
WAX, Bees, English	170	0	175	0	172	6	175	0
German..........	162	6	180	0	175	0	180	0
American	165	0	175	0	160	0	170	0
white fine	0	0	.. 0	0	0	0	0	0
Jamaica..........	165	0	175	0	175	0	180	0
Gambia	170	0	175	0	170	0	175	0
Mogadore	130	0	155	0	125	0	170	0
East India........	140	0	180	0	140	0	170	0
ditto, bleached..	170	0	220	0	165	0	200	0
vegetable, Japan..	58	0	..72	0	58	0	..84	0
WOOD, DYE, per ton,								
Fustic, Cuba	145	0	155	0	145	0	150	0
Jamaica..........	120	0	140	0	110	0	115	0
Savanilla	115	0	.. 0	6	100	0	.. 0	0
Zante	0	0	.. 0	0	0	0	.. 0	0
Logwood, Cmpchy	185	0	195	0	180	0	190	0
Honduras	125	0	130	0	140	0	145	0
St. Domingo. ..	95	0	0	0	110	0	.. 0	0
Jamaica........	85	0	..90	0	107	6	.. 0	0

PATENTS

The abridged Specifications of Patents given below are prepared specially for this Journal by Mr. R. A. Brooman, from official copies supplied by the Government, and are therefore the property of the Proprietor of this Journal. Other papers are requested not to reproduce them without acknowledgment:—

3390. G. Savory. *An apparatus for the inhalation of medicinal powders or vapours for the treatment of diseases of the throat and lungs.* (A communication.) Dated December 18, 1862.

This apparatus consists of a receptacle of glass, metal, or any other suitable material, into which are introduced impalpable powders, also certain liquids, such as chloroform, creosote, &c. The powder of the vapour of liquids is forced out of the receptacle by means of an india-rubber bottle containing air connected by an elastic tube. On the opposite side of the receptacle is fitted a tube of ivory or glass, perforated at its extremity with small apertures to convey the powder or vapour into the throat or chest. *Patent completed.*

3423. R. A. Brooman. *A new or improved colouring matter or dye.* (A communication.) Dated December, 23, 1862.

The object of this invention is the production of a new colouring matter for dyeing and printing, which the inventor terms "Imperial Ruby." The colour (the normal tone of which is a cerise, or its derivative shade) is obtained by the combination of fuchsine and coralline, or any other yellow or orange colour extracted from coal. Process:—The fuchsine and coralline are dissolved, together or separately, in methylated spirit, acetic acid, alcohol, or other spirit. The coralline predominates in quantity over the fuchsine: thus, to obtain the normal tone of imperial ruby, the inventor takes, say, three parts of coralline to two parts of fuchsine. These proportions may, however, be varied; any excess of coralline in the dyeing bath tends to produce a yellower cerise, while an excess of fuchsine, on the contrary, imparts a more violet shade: thus, by varying the proportion of one or other of the products, all the gradations of shades of cerise and its derivatives may be obtained. *Patent completed.*

A MONSTER BALLOON.

A meeting, composed of members of the National Institute, of various scientific societies, of railway directors, bankers, and directors of the press, was lately held in Paris at the manufactory of M. Nadar, to hear his explanation of a new balloon. M. Nadar explained to the assembly his theory of aërial locomotion by the substitution of a screw and of inclined planes for the present system of air balloons. He admitted that this theory was not new, inasmuch as in the year 1768 it was predicted that the screw would be employed in aërial navigation. M. Nadar concluded by appealing to the company to assist him in making his system known, and in reducing it to practice.

M. de la Landelle, who is connected with Nadir in the construction of the balloon, confirmed his colleague's statement, and set in motion several models of machines constructed by M. de Ponton d'Annecourt, who is likewise a partner in the affair. These balloons were raised automatically, lifting graduated weights so perfectly as in all appearance to demonstrate the accuracy of the theory. It is announced that an Anglo-French company is formed to provide the amount necessary for the construction of a gigantic balloon capable of raising eighty persons in a car two stories high, which will contain provisions and other necessaries, including, it is said, a printing press. The diameter of the balloon is to be equal to three-fourths the height of the towers of Notre Dame. 12,000 yards of white silk have been supplied by a Lyons manufacturer, at 7f. the yard.

This monster balloon is to be inaugurated next month at the races of Baden-Baden. Subscribers for the trip have already set down their names. It is to last eight days and eight nights. After having made a trip across the Channel and another in the Mediterranean, the company at whose expense the balloon is to be constructed will exhibit it in London, Paris, and New York. The produce of the exhibitions is to be employed in the construction of a definitive aërial locomotive. M. J. Godard, the celebrated aëronaut, has suggested an improvement to M. Nadar. He suggests the addition of a second balloon under the large one, which may serve as a reservoir for the preservation of a supply of gas, by which means the journey through the air may be prolonged.